Cochise County
Board of Supervisors

Public Programs…Personal Service
www.cochise.az.gov

ANN ENGLISH
Chairman
District 2

PATRICK G. CALL
Vice-Chairman
District 1

PEGGY JUDD
Supervisor
District 3

EDWARD T. GILLIGAN
County Administrator

ARLETHE G. RIOS
Clerk of the Board

AGENDA FOR REGULAR BOARD MEETING
Tuesday, August 22, 2017 at 10:00 AM
BOARD OF SUPERVISORS HEARING ROOM
1415 MELODY LANE, BUILDING G, BISBEE, AZ 85603

ANY ITEM ON THIS AGENDA IS OPEN FOR DISCUSSION AND POSSIBLE ACTION

PLEDGE OF ALLEGIANCE

THE ORDER OR DELETION OF ANY ITEM ON THIS AGENDA IS SUBJECT TO MODIFICATION AT THE MEETING

ROLL CALL
Members of the Cochise County Board of Supervisors will attend either in person or by telephone, video or internet conferencing.

The Board may permit public comment during the discussion of any item on this agenda. If you wish to be heard on a specific item, please sign up to be heard using the 'Specific Item' on the speaker form provided, and please list the item about which you wish to be heard. Persons will be permitted three minutes to speak.

Note that some attachments may be updated after the agenda is published. This means that some presentation materials displayed at the Board meeting may differ slightly from the attached version.

CONSENT

CALL TO THE PUBLIC

Board of Supervisors

This is the time for the public to comment. Members of the Board may not discuss items that are not specifically identified on the agenda.

1. Approve the Minutes of the regular meeting of the Board of Supervisors of August 8, 2017.

2. Ratify a Letter of Congratulations to Chief Emeritus Lee Edward Lewis, San Jose Fire District for his service to his community during his 40 year involvement with the fire district.

County Schools

3. Approve Intergovernmental Agreement (IGA) SABG-GR-16-040116-01 between the Arizona State Office of Youth, Faith, & Family and the Cochise County School Superintendent's Office for substance abuse prevention for the period of April 1, 2016 through September 30, 2016 in the amount of $20,000.

4. Approve Amendment 2 to Intergovernmental Agreement (IGA) SABG-GR-16-040116-02 between the Arizona State Office of Youth, Faith, & Family and the Cochise County School Superintendent's Office for substance abuse prevention for the period of October 1, 2016 through September 30, 2017 in the amount of $40,000.

County Treasurer

5. Adopt Resolution 17-16 authorizing Cochise County Treasurer to collect and disburse the property taxes for 2017.

Court Administration

6. Approve amendment 1 to the contract with Revolutionary Text, LLC for remote reporting services.

Finance

7. Approve demands and budget amendments for operating transfers.

PUBLIC HEARINGS

Board of Supervisors

8. [ITEM TABLED FROM AUGUST 8, 2017 MEETING]:Adopt Resolution 17-13 granting a Telecommunications and Fiber Optic Services franchise to Level 3 Communications, LLC.

ACTION

Board of Supervisors

9. Approve Memorandum of Understanding 2017-081 between the Department of Public Safety and Cochise County in the amount of $166,666 to be used for prosecutorial and jail expenses incurred from individuals charged with drug trafficking, human smuggling, illegal immigration and other border related crime.

Community Development

10. Adopt Resolution 17-17 updating the Cochise County Road Design and Construction Standards and Specifications for Public Improvements.

County Schools

11. Approve Intergovernmental Agreement (IGA) No. SABG-GR-18-070117-02 between the State of Arizona Governor's Office of Youth, Faith, and Family and the Cochise County School Superintendent's Office to provide guidance and direction for five schools for the Healthy Families/Healthy Youth Pilot Program for the period of July 1, 2017 through September 30, 2017 in the amount of $98,835.

Facilities

12. Approve Airport Improvement Plan Grant Offer #3-04-0013-011-2017 from the Federal Aviation Administration (FAA) in the amount of $741,497 with a local match share of $37,075 for the Reconstruction of Taxiway A at the Bisbee Douglas International (BDI) Airport.

REPORT BY EDWARD T. GILLIGAN COUNTY ADMINISTRATOR -- RECENT AND PENDING COUNTY MATTERS

SUMMARY OF CURRENT EVENTS

Report by District 1 Supervisor, Patrick Call

Report by District 2 Supervisor, Ann English

Report by District 3 Supervisor, Peggy Judd

Pursuant to the Americans with Disabilities Act (ADA), Cochise County does not, by reason of a disability, exclude from participation in or deny benefits or services, programs or activities or discriminate against any qualified person with a disability. Inquiries regarding compliance with ADA provisions, accessibility or accommodations can be directed to Chris Mullinax, Safety/Loss Control Analyst at (520) 432-9720, FAX (520) 432-9716, TDD (520) 432-8360, 1415 Melody Lane, Building F, Bisbee, Arizona 85603.

Consent 1.

Regular Board of Supervisors Meeting **Board of Supervisors**

Meeting Date:	08/22/2017		
Minutes			
Submitted By:	Melissa Belasco, Board of Supervisors		
Department:	Board of Supervisors		
Presentation:	No A/V Presentation	**Recommendation:**	
Document Signatures:		**# of ORIGINALS Submitted for Signature:**	
NAME of PRESENTER:	n/a	**TITLE of PRESENTER:**	n/a
Mandated Function?:		**Source of Mandate or Basis for Support?:**	

Information

Agenda Item Text:
Approve the Minutes of the regular meeting of the Board of Supervisors of August 8, 2017.

Background:
Minutes

Department's Next Steps (if approved):
Signed minutes routed for processing and posted on the internet.

Impact of NOT Approving/Alternatives:
n/a

To BOS Staff: Document Disposition/Follow-Up:
Scan to OnBase and File.

Budget Information

Information about available funds

Budgeted: ◯ **Funds Available:** ◯ **Amount Available:**

Unbudgeted: ◯ **Funds NOT Available:** ◯ **Amendment:** ☐

Account Code(s) for Available Funds

1:

Fund Transfers

Attachments

No file(s) attached.

Consent 2.

Regular Board of Supervisors Meeting **Board of Supervisors**

Meeting Date: 08/22/2017

Letter of Congratulations to San Jose Fire District Chief

Submitted By: Arlethe Rios, Board of Supervisors

Department: Board of Supervisors

Presentation:	No A/V Presentation	**Recommendation:**	
Document Signatures:		**# of ORIGINALS Submitted for Signature:**	
NAME of PRESENTER:	n/a	**TITLE of PRESENTER:**	n/a
Mandated Function?:		**Source of Mandate or Basis for Support?:**	

Information

Agenda Item Text:

Ratify a Letter of Congratulations to Chief Emeritus Lee Edward Lewis, San Jose Fire District for his service to his community during his 40 year involvement with the fire district.

Background:

The San Jose Fire District members and citizens request a formal letter of recognition from the Board of Supervisors for Chief Lewis' service.

Department's Next Steps (if approved):

Chairman English presented the Letter and Certificate at the August 12, 2017 Event.

Impact of NOT Approving/Alternatives:

Chief Lewis will not be recognized by the Board.

To BOS Staff: Document Disposition/Follow-Up:

See next steps.

Budget Information

Information about available funds

Budgeted: ☐	**Funds Available:** ☐	**Amount Available:**
Unbudgeted: ☐	**Funds NOT Available:** ☐	**Amendment:** ☐

Account Code(s) for Available Funds

1:

Fund Transfers

Attachments

Letter

Cochise County
Board of Supervisors

Public Programs...Personal Service
www.cochise.az.gov

ANN ENGLISH
Chairman
District 2

PATRICK G. CALL
Vice-Chairman
District 1

PEGGY JUDD
Supervisor
District 3

EDWARD T. GILLIGAN
County Administrator

ARLETHE G. RIOS
Clerk of the Board

August 8, 2017

San Jose Fire District
P.O. Box 427
Bisbee, AZ 85603

RE: Recognition of Chief Emeritus Lee Edward Lewis

We would like to formally recognize Chief Lewis for his service over 40 years to the San Jose Fire District and its community. We applaud your dedication to ensure a district was formed and then continued to run for decades to ensure the safety of those in your community. Selflessness is often overseen when emergencies are prevented by those that sacrifice their safety for the safety of others.

Your contribution to this community as a local and renowned mechanic/machinist and as a Volunteer Firefighter has made a positive impact on so many and there are no words to truly express our gratitude and admiration.

Again, our greatest congratulations on your well deserved recognition and thank you for your service to our community.

Sincerely,

Ann English
Chairman
District 2

Patrick G. Call
Vice-Chairman
District 1

Peggy Judd
Supervisor
District 3

1415 Melody Lane, Building G
Bisbee, Arizona 85603
520-432-9200
520-432-5016 fax
board@cochise.az.gov

Consent 3.

Regular Board of Supervisors Meeting **County Schools**

Meeting Date:	08/22/2017		
Healthy Families Grant			
Submitted By:	Arlethe Rios, Board of Supervisors		
Department:	Board of Supervisors		
Presentation:	No A/V Presentation	**Recommendation:**	Approve
Document Signatures:	BOS Signature Required	**# of ORIGINALS Submitted for Signature:**	2
NAME of PRESENTER:	Trudy Berry	**TITLE of PRESENTER:**	School Superintendent
Mandated Function?:	Not Mandated	**Source of Mandate or Basis for Support?:**	

You will use this Agenda Item template if your item involves a Grant (whether a new or renewal grant). You also must attach the Grant Approval Form to the item before Finance will approve it. Select the SPECIAL LINKS on your left-hand menu and Click on "Grant Approval Form". Then complete the form, save it and attach it to your item (on the Attachments tab).

Information

Agenda Item Text:

Approve Intergovernmental Agreement (IGA) SABG-GR-16-040116-01 between the Arizona State Office of Youth, Faith, & Family and the Cochise County School Superintendent's Office for substance abuse prevention for the period of April 1, 2016 through September 30, 2016 in the amount of $20,000.

Background:

The Governor's Office has requested and all 15 County Superintendents have agreed to pilot this project.

Department's Next Steps (if approved):

Implement the rogram

Impact of NOT Approving/Alternatives:

None

To BOS Staff: Document Disposition/Follow-Up:

Send an original copy to the Governor's Office.

Budget Information

Information about available funds

Budgeted: ◯ **Funds Available:** ◯ **Amount Available:**

Unbudgeted: ◯ **Funds NOT Available:** ◯ **Amendment:** ☐

Account Code(s) for Available Funds

1:

Fund Transfers

Attachments

Healthy Families IGA
Grant Budget
Healthy Families Information
IGA

SAMPLE BUDGET – County Superintendents

Category	Description	Amount
Personnel	Project Manager .50% @ $50,000 ($50,000 x .50% X 6 months = $2,083)	$12,500.00
Fringe	Employee related expenses are approximately 30% of the salaries including health benefits	$3,750.00
Travel	Travel is determined at the AZ State rate of $.445 per mile. $.445 x 500 miles = $222	$222.00
Supplies	Program materials - printed materials, copy paper, envelopes, note pads, file folders, pens, pencils, markers, binder clips, postage and internet.	$3,000.00
Other	Phone and internet	$528.00
Total Project Costs		$20,000

DRAFT

SAMPLE BUDGET – County Superintendents

Category	Description	Amount
Personnel	Project Manager .50% @ $50,000 ($50,000 x .50% X 6 months = $2,083)	$12,500.00
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DRAFT

HEALTHY FAMILIES — HEALTHY YOUTH

Educating Youth And Families On The Dangers Of Substance Abuse



Did you know the average age for starting to use an addictive drug is 13 years old.

To educate families and youth leaving elementary school on the dangers of substance abuse, The Governor's Office of Youth, Faith and Family has developed the Healthy Families, Healthy Youth initiative.

The initiative will foster and cultivate student health and wellness choices in regard to substance use through education and outreach.

THE GOALS

- Educate students and their parents about today's substances with a focus on prevention.
- Provide students and parents with the tools necessary to make healthy choices in regard to substance use.
- Help youth and adults engage in meaningful dialogue about substance abuse and family norms.
- Promote youth and family prevention strategies through the creation of an annual "Family Plan".
- Promote youth, family and school wellness through comprehensive education.
- Provide youth, families and schools with prevention, intervention and treatment resources.

PEER EDUCATION

The initiative will focus on peer education which is a successful model used nationwide and includes a number of benefits:

- Trained peer educators are often perceived as a more credible source of information than adult educators, and can serve as positive role models.
- Peer- led education can also improve teens' inclination to take action steps toward prevention.
- Adolescents who were counseled by peers were more likely to engage in an interactive discussion.
- Youth led programs may provide meaningful involvement with opportunities to increase self-discipline and self-esteem.

Are you a school administrator seeking more information about the High School Health & Wellness grant program? Contact us at (602) 542-4043 or visit out website at http://goyff.az.gov/.

Do you our someone you know need assistance in dealing with substance abuse? Visit www.substanceabuse.az.gov

Governor's Office of Youth, Faith and Family

INTERGOVERNMENTAL AGREEMENT
NO. IGA-SABG-GR-16-040116-02

Between the

STATE OF ARIZONA
GOVERNOR'S OFFICE OF YOUTH, FAITH AND FAMILY

And the

COCHISE COUNTY SCHOOL SUPERINTENDENT'S OFFICE

This Intergovernmental Agreement ("Agreement") is entered into by and between the State of Arizona, the Governor's Office of Youth, Faith and Family, located at 1700 West Washington, Suite 230, Phoenix, Arizona 85007 ("GOYFF" or "State of Arizona") and the Cochise County School Superintendent's Office, located at 100 Clawson Avenue, P.O. Drawer 208, Bisbee, Arizona 85603.

WHEREAS, the U.S. Department of Health and Human Services provided funding to the Arizona Department of Health Services under the Substance Abuse Block Grant ("SABG"). The SABG is administered through the Substance Abuse and Mental Health Services Administration of the U.S. Department of Health and Human Services.

WHEREAS, the Arizona Department of Health Services provided Substance Abuse Block Grant Funding to the Governor's Office of Youth, Faith and Family under Interagency Service Agreement No. HS632006.

WHEREAS, A.R.S. §41-101.01 authorizes the Governor's Office of Youth, Faith and Family to execute and administer agreements and accept and expend any funds received from the federal government or any agency thereof.

WHEREAS, A.R.S. §11-952 authorizes public agencies to enter into agreements to contract for services.

WHEREAS, A.R.S. §15-301 authorizes the Cochise County School Superintendent's Office to enter into agreements with other governmental entities and agencies in order to receive and spend local, state and federal monies to provide programs and services to school districts, charter schools, county free library districts, and municipal libraries within the county.

THEREFORE, in consideration of the mutual promises and covenants contained herein and other good and valuable consideration, the receipt of which the parties hereby acknowledge, the parties enter into this Agreement as follows:

I. PURPOSE OF AGREEMENT

The purpose of this Agreement is to specify the responsibilities and procedures for the Cochise County School Superintendent's Office's role in the development, coordination, and implementation of Peer/Parent Substance Use Prevention Programming in a county middle school selected by the Cochise County School Superintendent's Office.

II. TERM OF AGREEMENT, TERMINATION AND AMENDMENTS

The term of the Agreement shall commence April 1, 2016, and shall remain in effect until September 30, 2016, contingent upon GOYFF's receipt of final federal SABG funding, unless terminated, canceled, or extended as otherwise provided herein.

Either party may terminate this Agreement at any earlier time by providing written notice to the other party at least thirty (30) days prior to the termination date. The GOYFF agrees that regardless of its termination date with the Cochise County School Superintendent's Office, the Cochise County School Superintendent's Office may use the funds distributed under this Agreement to pay for any unpaid services pursuant to this Agreement obligated prior to the date of termination. This Agreement is subject to cancellation pursuant to A.R.S. § 38-511, the provisions of which are incorporated herein.

Amendments to this Agreement shall be made in writing and signed by both parties.

III. DESCRIPTION OF SERVICES

The Cochise County School Superintendent's Office shall:

1. Select and secure participation of one middle school that will include the entire 7th grade student population.
2. Provide the GOYFF with the total number of students in 7th grade.
3. Identify a Project Manager from the Cochise County School Superintendent's Office staff ("Project Manager.")
4. Ensure that the Project Manager attends the entire training at the middle school site scheduled during July or August, 2016.
5. Ensure the County Superintendent's attendance at the entire two hour event at the middle school scheduled for September, 2016.
6. Require that the Project Manager maintains regular contact with the middle school Project Coordinator to ensure the school's grant deliverables are met.
7. Provide services in accordance with this Agreement, which includes Attachment A (entitled *Cochise County Proposed Budget for Lowell School*, incorporated into this Agreement in its entirety) and Attachment B (entitled *Federal Terms and Conditions*, incorporated into this Agreement in its entirety).

IV. REPORTING REQUIREMENTS

The Cochise County School Superintendent's Office shall submit invoices and programmatic reports detailing all services rendered in accordance with this Agreement on a monthly basis. The reporting deadlines are:

- May 31, 2016
- June 30, 2016
- July 31, 2016
- August 31, 2016
- September 30, 2016

V. MANNER OF FINANCING

The GOYFF shall:

1. Provide no more than $20,000 to the Cochise County School Superintendent's Office, for costs associated with the activities listed in (i) Section III of this Agreement and (ii) Attachment A, entitled *Cochise County Proposed Budget for Lowell School*, incorporated into this Agreement in its entirety and (iii) Attachment B, entitled *Federal Terms and Conditions*, incorporated into this Agreement in its entirety.
2. Provide payment upon receipt and approval of the invoices for services performed or goods received.

The Cochise County School Superintendent's Office shall:

1. Use the SABG funds received from GOYFF exclusively to support the activities outlined in (i) Section III of this Agreement, (ii) Attachment A, entitled *Cochise County Proposed Budget for Lowell School*, incorporated into this Agreement in its entirety, and (iii) Attachment B, entitled *Federal Terms and Conditions*, incorporated into this Agreement by in its entirety.
2. Agree that all reimbursement of in-state travel expenses shall be paid only in accordance with the Domestic Per Diem rates allowed under the State of Arizona Travel Policy, and the prevailing State of Arizona standard mileage rates, located at https://gao.az.gov/travel/welcome-gao-travel. There shall be no reimbursement of out-of-state travel expenses.
3. All questions regarding the appropriate use of the SABG funds shall be resolved by mutual written agreement between the Cochise County School Superintendent's Office and the GOYFF.

VI. DOCUMENTS INCORPORATED BY REFERENCE

The State of Arizona's Uniform Terms and Conditions V9_ (Rev 7-1-2013) are incorporated into this document as if fully set forth herein. Copies of the Uniform Terms and Conditions may be accessed at https://spo.az.gov/sites/default/files/documents/files/Uniform%20Terms%20and%20Conditions%20V9_%28Rev%207-1-2013%29.pdf. The Cochise County School Superintendent's Office warrants that it has read and understands the Uniform Terms and Conditions V9_ (Rev 7-1-2013) and agrees to be bound by them in their entirety. In the event of any divergence between this Agreement and the Uniform Terms and Conditions, this Agreement shall control.

VII. NON-AVAILABILITY OF FUNDS

In accordance with A.R.S. § 35-154, every payment obligation of the GOYFF/Arizona Office of the Governor under the Agreement is conditioned upon the availability of funds appropriated or allocated for payment of such obligation. If funds are not allocated and available for the continuance of this Agreement, this Agreement may be terminated by the GOYFF/Arizona Office of the Governor at the end of the period for which funds are available. No liability shall accrue to Arizona Office of the Governor in the event this provision is exercised, and the GOYFF/Arizona Office of the Governor shall not be obligated or liable for any future payments or for any damages as a result of termination under this paragraph.

VIII. INDEMNIFICATION

To the fullest extent permitted by law, the Cochise County School Superintendent's Office shall defend, indemnify, and hold harmless the State of Arizona, and its departments, agencies, boards, commissions, universities, officers, officials, agents, and employees (hereinafter referred to as "Indemnitee") from and against any and all claims, actions, liabilities, damages, losses, or expenses (including court costs,

attorneys' fees, and costs of claim processing, investigation and litigation) (hereinafter referred to as "Claims") for bodily injury or personal injury (including death), or loss or damage to tangible or intangible property caused, or alleged to be caused, in whole or in part, by the negligent or willful acts or omissions of the Cochise County School Superintendent's Office or any of its owners, officers, directors, agents, employees or subcontractors. This indemnity includes any claim or amount arising out of, or recovered under, the Workers' Compensation Law or arising out of the failure of such the Cochise County School Superintendent's Office to conform to any federal, state, or local law, statute, ordinance, rule, regulation, or court decree. It is the specific intention of the parties that the Indemnitee shall, in all instances, except for Claims arising solely from the negligent or willful acts or omissions of the Indemnitee, be indemnified by the Cochise County School Superintendent's Office from and against any and all claims. It is agreed that the Cochise County School Superintendent's Office will be responsible for primary loss investigation, defense, and judgment costs where this indemnification is applicable. In consideration of the award of this Agreement, the Cochise County School Superintendent's Office agrees to waive all rights of subrogation against the State of Arizona, its officers, officials, agents, and employees for losses arising from the work performed by the Cochise County School Superintendent's Office for the State of Arizona.

This indemnity shall not apply if the contractor or sub-contractor(s) is/are an agency, board, commission or university of the State of Arizona.

IX. INSURANCE

The Cochise County School Superintendent's Office is a public entity and shall provide a certificate of self-insurance.

X. OTHER

It is agreed that the parties to this Agreement have participated fully in the negotiation and preparation of the Agreement. Any rule of construction to the effect that ambiguities are to be resolved against the drafting party shall not apply in interpreting this Agreement. The parties acknowledge they have been advised by counsel, or have had the opportunity to be advised by counsel, in the negotiation and execution of the Agreement.

The parties agree to follow all applicable laws, rules and regulations in the performance of work in furtherance of the Substance Abuse Block Grant initiative and this Agreement.

XI. NOTICES

The Cochise County School Superintendent's Office shall address all notices relative to this Agreement to:

Deborrah Miller
Special Project Manager
Governor's Office of Youth, Faith and Family
1700 West Washington, Suite 230
Phoenix, Arizona 85007

The GOYFF shall address all notices relative to this Agreement to:

Trudy Berry
Superintendent
Cochise County School Superintendent's Office
100 Clawson Avenue, P.O. Drawer 208
Bisbee, Arizona 85603

IN WITNESS WHEREOF, the parties hereto agree to execute this Agreement.

COCHISE COUNTY SCHOOL SUPERINTENDENT'S OFFICE

Trudy Berry Date
Cochise County School Superintendent

GOVERNOR'S OFFICE OF YOUTH, FAITH AND FAMILY

Debbie Moak Date
Director

Travis Price Date
Compliance Finance and Procurement Manager
Office of the Governor

Consent 4.

Regular Board of Supervisors Meeting **County Schools**

Meeting Date:	08/22/2017		
Healthy Families Grant			
Submitted By:	Arlethe Rios, Board of Supervisors		
Department:	Board of Supervisors		
Presentation:	No A/V Presentation	**Recommendation:**	Approve
Document Signatures:	BOS Signature NOT Required	**# of ORIGINALS Submitted for Signature:**	0
NAME of PRESENTER:	n/a	**TITLE of PRESENTER:**	n/a
Mandated Function?:	Not Mandated	**Source of Mandate or Basis for Support?:**	

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Information

Agenda Item Text:

Approve Amendment 2 to Intergovernmental Agreement (IGA) SABG-GR-16-040116-02 between the Arizona State Office of Youth, Faith, & Family and the Cochise County School Superintendent's Office for substance abuse prevention for the period of October 1, 2016 through September 30, 2017 in the amount of $40,000.

Background:

The Governor's Office has requested and all 15 County Superintendents have agreed to continue with this project.

Department's Next Steps (if approved):

Continue with the program

Impact of NOT Approving/Alternatives:

None

To BOS Staff: Document Disposition/Follow-Up:

Send an original copy to the Governor's Office.

Budget Information

Information about available funds

Budgeted: ◯ **Funds Available:** ◯ **Amount Available:**

Unbudgeted: ◯ **Funds NOT Available:** ◯ **Amendment:** ☐

Account Code(s) for Available Funds

1:

Fund Transfers

Attachments

Healthy Families Information

Amendment 2

HEALTHY FAMILIES — HEALTHY YOUTH

Educating Youth And Families On The Dangers Of Substance Abuse



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Do you our someone you know need assistance in dealing with substance abuse? Visit www.substanceabuse.az.gov

Governor's Office of Youth, Faith and Family

STATE OF ARIZONA
OFFICE OF THE GOVERNOR

DOUGLAS A. DUCEY
GOVERNOR

DEBBIE MOAK
DIRECTOR

Via email: jclay@cochise.az.gov

June 27, 2017

Ms. Jacqui Clay,Ed.S.
Cochise County School Superintendent
Cochise County School Superintendent's Office
100 Clawson Avenue, P.O. Drawer 208
Bisbee, Arizona 85603

Re: Amendment 2, Intergovernmental Agreement No. IGA-SABG-GR-16-040116-02
Substance Abuse Block Grant

Dear Dr. Clay:

An Amendment to provide additional support for the Cochise County School Superintendent's role in the development, coordination, and implementation of Peer/Parent Substance Use Prevention Programming is attached for signature.

- **WHEN THE DOCUMENT HAS BEEN SIGNED, PLEASE EMAIL THE AMENDMENT BACK TO ME AT SBEAN@AZ.GOV BY JULY 11, 2017.**
- **OUR OFFICE WILL THEN COUNTERSIGN THE DOCUMENT AND EMAIL A FULLY EXECUTED AMENDMENT BACK TO YOU FOR YOUR RECORDS.**
- **PLEASE EMAIL A CERTIFICATE OF SELF-INSURANCE**

The Governor's Office of Youth, Faith and Family looks forward to a mutually beneficial relationship during this Agreement period. Should you have any questions, please contact me at sbean@az.gov. **Unreturned documents may affect the start date of this transaction.**

Sincerely,

Sarah Bean
Procurement Manager

cc: Deborrah Miller, Program Manager

SAMPLE REIMBURSABLE BUDGET – Cochise County – County Superintendent Liaison Work

Category	Description	Amount
Personnel	School Coordinator 40% @ $50,000 ($50,000 x 40% x 12 months = $20,000.00) Cochise County Financial Liaison Point of contact for the Middle Schools and oversight for the pilot program. Liaison to the County Superintendent.	$20,000.00
Fringe/ERE	Employee related expenses are approximately 30% of the salaries including health benefits	$6,000.00
Personnel	Financial Liaison	$5,000.00
Supplies	Office supplies for program - printed materials, copy paper, envelopes, note pads, file folders, pens, pencils, markers, binder clips, postage, internet and cell phone.	$2,364.00
Travel	Travel costs for mandatory GOYFF meeting & local mileage	$3,000.00
	Sub-Total	**$36,364.00**
Indirect	10% of Direct Expenses or Federally Approved Indirect Rate	$3,636.00
	Total Project Costs	**$40,000.00**

ATTACHMENT B
REVISED FEDERAL TERMS AND CONDITIONS

I. KEY PERSONNEL

It is essential that the Cochise County School Superintendent's Office train and provide adequate, experienced personnel, capable of and devoted to the successful accomplishment of projects that may be performed under this Agreement. The Cochise County School Superintendent's Office must agree to assign experienced individuals to project positions.

A. The Cochise County School Superintendent's Office agrees that, once assigned to work on a project under this Agreement, key personnel should not be removed or replaced without prior written notice to the GOYFF.

B. If key personnel are not available for work on a specific project, for a continuous period exceeding thirty (30) calendar days, or are expected to devote substantially less effort to the work than initially anticipated, the Cochise County School Superintendent's Office shall immediately notify the GOYFF Program Administrator and shall, subject to the concurrence of the GOYFF, replace such personnel with personnel of substantially equal ability and qualifications.

C. The Cochise County School Superintendent's Office shall assign specific individuals to the key programmatic and fiscal positions and other changes to key personnel, specifically the Cochise County School Superintendent's Office's SABG Coordinator must be reported on or before the effective date of such change to the GOYFF.

II. HEALTH INSURANCE PORTABILITY AND ACCOUNTABILITY ACT ("HIPAA") OF 1996

A. The Cochise County School Superintendent's Office warrants that it is familiar with the requirements of HIPAA, as amended by the Health Information Technology for Economic and Clinical Health Act ("HITECH ACT") of 2009, and accompanying regulations and will comply with all applicable HIPAA requirements in the course of this Agreement. Cochise County School Superintendent's Office warrants that it will cooperate with the GOYFF in the course of performance of the Agreement so that both GOYFF and the Cochise County School Superintendent's Office will be in compliance with HIPAA, including cooperation and coordination with the Arizona Department of Administration-Arizona Strategic Enterprise Technology ("ADOA-ASET") Office, the ADOA-ASET Arizona State Chief Information Security Office and HIPAA Coordinator and other compliance officials required by HIPAA and its regulations. The Cochise County School Superintendent's Office will sign any documents that are reasonably necessary to keep GOYFF and the Cochise County School Superintendent's Office in compliance with HIPAA, including, but not limited to, business associates agreements.

B. If required by the GOYFF, the Cochise County School Superintendent's Office agrees to sign a "Pledge to Protect Confidential Information" and to abide by the statements addressing the creation, use and disclosure of confidential information, including information designated as protected health information and all other confidential or sensitive information as defined in policy. In addition, if requested, the Cochise County School Superintendent's Office agrees to attend or participate in HIPAA training offered by the GOYFF or to provide written verification that the Cochise County School Superintendent's Office has attended or participated in job related HIPAA training that is (1) intended to make the Cochise County School Superintendent's Office proficient in HIPAA for purposes of performing the services required and (2) presented by a HIPAA Privacy Officer or other person or program knowledgeable and

experienced in HIPAA and who has been approved by the ADOA-ASET Arizona State Chief Information Security Officer and HIPAA Coordinator.

III. AGREEMENT RENEWAL

The Agreement shall not bind nor purport to bind the GOYFF for any contractual commitment in excess of the original Agreement period or amount. The GOYFF shall have the right, at its sole and unfettered discretion, whether or not to extend this Agreement. If so, the parties must execute a written amendment or a new contract. Consideration for renewal will also be based on results of program and fiscal monitoring.

IV. FUND MANAGEMENT

The Cochise County School Superintendent's Office must maintain funds received under this Agreement in separate ledger accounts and cannot mix these funds with other sources. The Cochise County School Superintendent's Office must manage funds according to applicable federal regulations for administrative requirements, cost principles and audits.

The Cochise County School Superintendent's Office must maintain adequate business systems to comply with federal requirements. The business systems that must be maintained are:

- Financial Management
- Procurement
- Personnel
- Property
- Travel

A system is adequate if it is: 1) written; 2) consistently followed - it applies in all similar circumstances; and 3) consistently applied – it applies to all sources of funds. The GOYFF reserves the right to review all business systems policies.

V. DUNS/CCR

Each successful recipient who is awarded funding must provide the following prior to an Agreement being executed: (a) Dun and Bradstreet Universal Numbering System (DUNS) number for the fiscal agent; and (b) proof of current registration in the Central Contractor Registration (CCR) database. Additionally, CCR registration must be maintained for the term of the Agreement. The DUNS website is located at http://fedgov.dnb.com/webform. The CCR registration information may be found at https://www.sam.gov/portal/public/SAM/.

VI. FFATA REPORTING REQUIREMENTS

The Cochise County School Superintendent's Office is required to provide certain information pursuant to the Federal Funding Accountability and Transparency Act of 2006 reporting requirements (Pub. L. No. 109-282, as amended by Section 6205 (a) of Pub. L. No. 110-252) "FFATA"). FFATA requires that certain information on federal awards (federal financial assistance and expenditures) be made available to the public via a single, searchable website, which is www.USASpending.gov.

VII. PUBLIC HEALTH LAW

Comply with all Public Health Law at http://www.samhsa.gov/grants/block-grants/laws-regulations and Terms and Conditions of Notice of Grant Award including, but not limited, to:

A. Confidentiality of Alcohol and Drug Patient Records (42 C.F.R. Part 2);
B. Charitable Choice Provisions; Final Rule (42 C.F.R. Part 54 and 54a);
C. Substance Abuse Prevention and Treatment Block Grant; Interim Final Rule (45 C.F.R. 96.45, 96.51, and 96.120-121);

D. Health Omnibus Programs Extension Act of 1988, Subtitle E General Provisions, November 4, 1988 (P.L. 100-607) [.pdf] (42 U.S.C. 300ee-5);
E. Children's Health Act of 2000 [P.L. 106310], October 17, 2000;
F. ADAMHA Reorganization Act of 1992 [P.L. 102-321], July 10, 1992; and
G. Public Health Service Act [includes Title V and Title XIX].

AMENDMENT # 2
INTERGOVERNMENTAL AGREEMENT #IGA-SABG-GR-16-040116-02

between the

STATE OF ARIZONA,
GOVERNOR'S OFFICE OF YOUTH, FAITH AND FAMILY

and

COCHISE COUNTY SCHOOL SUPERINTENDENT'S OFFICE

Pursuant to **Section II, TERM OF AGREEMENT, TERMINATION AND AMENDMENTS,** of the above-referenced Intergovernmental Agreement ("Agreement"), the following section of Amendment #1 to the Agreement is hereby amended as follows:

Section V, MANNER OF FINANCING
Section V, Manner of Financing, shall be amended in its entirety as follows:

1. Attachment A ("Budget") shall replace Attachment A in Amendment #1 as the current budget. Attachment A ("Sample Reimbursable Budget – Cochise County- County Superintendent Liaison Work") is incorporated into the Agreement in its entirety. The total contract funds from October 1, 2016 through September 30, 2017 shall be no more than $40,000.
2. The GOYFF shall provide up to $40,000 to support the Peer/Parent Substance Use Prevention Programming from October 1, 2016 to September 30, 2017, in accordance with Attachment A ("Sample Reimbursable Budget – Cochise County- County Superintendent Liaison Work"). The federal funds shall be spent in accordance with the requirements under the Substance Abuse Block Grant, C.F.D.A. No. 93.959.

FINANCIAL: The Grantee shall be paid on a cost-reimbursement basis. The Grantee shall not request reimbursement until the cost has resulted in an actual cash expenditure. The Grantee may request reimbursement on either a monthly or quarterly basis for those items submitted and approved in the budget inclusively. Grantee shall submit a final reimbursement request no more than thirty (30) days after the contract end for expenses incurred prior to the date of contract termination. All expenses must be incurred and paid prior to the final reimbursement request. Requests for reimbursement received later than thirty (30) days after the contract termination will not be paid.

The Grantee shall use the forms provided by the Grantor to submit financial expenditure reports. The forms will be sent to the Grantee upon receipt of the signed Amendment #2. Reimbursement requests shall be submitted to grantrfr@az.gov.

Grant recipients agree to use 2 C.F.R. Part 200, Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards for the identification of allowable and unallowable costs on grant expenditures. This federal guidance provides instruction on the allocation of allowable grant costs (e.g. time and effort or the determination of staff billing rates). The type of supporting documentation required for grant reimbursements in the guidance shall be followed.

Pursuant to **Section II, TERM OF AGREEMENT, TERMINATION AND AMENDMENT** of the Agreement, the following attachment to the Agreement is hereby amended as follows:

1. Attachment B ("Federal Terms and Conditions") shall be replaced in its entirety by Attachment B ("Revised Federal Terms and Conditions"). Attachment B ("Revised Federal Terms and Conditions") shall be incorporated into the Agreement in its entirety.

Except as specifically stated herein, all other terms and conditions of the Agreement and Amendment #1 to the Agreement remain unchanged.

In Witness Whereof, the parties hereto agree to execute this Amendment #2.

COCHISE COUNTY SCHOOL SUPERINTENDENT'S OFFICE

Jacqui Clay, Ed.S. Date
Cochise County School Superintendent

GOVERNOR'S OFFICE OF YOUTH, FAITH AND FAMILY

Samuel Burba Date
Interim Director

Travis Price Date
Compliance Finance and Procurement Manager
Office of the Governor

Consent 5.

Regular Board of Supervisors Meeting **County Treasurer**

Meeting Date: 08/22/2017

Resolution authorizing Cochise County Treasurer to collect and disburse the property taxes for 2017

Submitted By:	Pam Munsey, County Treasurer		
Department:	County Treasurer		
Presentation:	No A/V Presentation	**Recommendation:**	Approve
Document Signatures:	BOS Signature Required	**# of ORIGINALS Submitted for Signature:**	1
NAME of PRESENTER:	Catherine L. Traywick	**TITLE of PRESENTER:**	Treasurer
Mandated Function?:	Federal or State Mandate	**Source of Mandate or Basis for Support?:**	

Docket Number (If applicable):

Information

Agenda Item Text:

Adopt Resolution 17-16 authorizing Cochise County Treasurer to collect and disburse the property taxes for 2017.

Background:

Pursuant to A.R.S. 42-18003 the attached resolution allows for the collection of 2017 property taxes by the County Treasurer.

Department's Next Steps (if approved):

Cochise County Treasurer's office will collect and disburse 2017 property taxes.

Impact of NOT Approving/Alternatives:

Pursuant to A.R.S. 42-18003, which states “On completing the assessment and tax roll, the county board of supervisors shall adopt a resolution for the collection of taxes by the county treasurer as provided by law from the persons who are listed in the roll. The county treasurer is thereafter responsible for collecting the totals of all taxes levied on the roll”.

To BOS Staff: Document Disposition/Follow-Up:

Please send signed copy of resolution to Treasurer's Office, Thank you.

Budget Information

Information about available funds

Budgeted: ◯ **Funds Available:** ◯ **Amount Available:**

Unbudgeted: ◯ **Funds NOT Available:** ◯ **Amendment:** ☐

Account Code(s) for Available Funds

1:

Fund Transfers

Fiscal Impact & Funding Sources (if known):

Cochise County Treasurer's office will collect and disburse 2017 property taxes.

Attachments

Treas Resolution 2017 Tax Collection

RESOLUTION 17-___

AUTHORIZING THE COCHISE COUNTY TREASURER TO COLLECT AND DISBURSE THE PROPERTY TAXES FOR 2017

WHEREAS, the Tax Roll and Cross-index for the 2017 property taxes have been prepared in the manner required by law and have been previously delivered to the Cochise County Treasurer; and

WHEREAS, the Board of Supervisors has established the applicable tax rates and tax levies by formal action taken on August 21, 2017, in the manner required by law; and

WHEREAS, upon the completion of the property assessments and tax roll, the Board of Supervisors is required by A.R.S. § 42-18003 to adopt a resolution for the collection of the taxes by the Treasurer, in the manner required by law; and

WHEREAS, the subject 2017 Tax Roll, a voluminous document previously physically delivered to the Treasurer, is hereby incorporated by reference to this Resolution,

IT IS HEREBY RESOLVED that the Cochise County Treasurer is hereby directed and authorized to collect the property taxes as indicated on the 2017 Tax Roll and to perform all other actions necessary for the proper receipt and disbursement of these funds.

PASSED, APPROVED AND ADOPTED by the Cochise County Board of Supervisors, _____ day of _____, 2017.

_____
Ann English, Chairman
Cochise County Board of Supervisors

ATTEST:

_____
Arlethe Rios,
Clerk of the Board

APPROVED AS TO FORM:



_____
Britt Hanson,
Chief Civil Deputy County Attorney

Consent 6.

Regular Board of Supervisors Meeting **Court Administration**

Meeting Date:	08/22/2017		
Approve contract amendment with Revolutionary Text, LLC			
Submitted By:	Shawneen Serrano, Court Administration		
Department:	Court Administration		
Presentation:	No A/V Presentation	**Recommendation:**	Approve
Document Signatures:	BOS Signature Required	**# of ORIGINALS Submitted for Signature:**	0
NAME of PRESENTER:	Eric Silverberg	**TITLE of PRESENTER:**	Court Administrator
Docket Number (If applicable):			
Mandated Function?:	Federal or State Mandate	**Source of Mandate or Basis for Support?:**	

Information

Agenda Item Text:

Approve amendment 1 to the contract with Revolutionary Text, LLC for remote reporting services.

Background:

In 2016, the County executed a contract on behalf of Superior Court following a formal RFQ Procurement process with Revolutionary Text, LLC to provide remote reporting services. We were the first county to do it and we were successful.
Currently, we use this service regularly in two courtrooms and expect to add a third court in the Fall to provide service in Sierra Vista. The Sierra Vista courthouse does not currently have the necessary technology installed to access this service. This amendment will provide the funding necessary to maintain services to the two current courtrooms. The amount allocated to bring in new courtrooms (equipment installation) has been adjusted upwards to reflect actual costs and better equipment. Experience showed that we received a bargain price for the two initial equipment installs.The modest increase for reporter services reflects the national and local shortage of qualified reporters.
These increased costs were included within our FY17/18 budget request. These revised cost figures should remain constant for the remainder of the five year contract term.

The original term remains the same.

Costs. For each courtroom we have added $1,000 to the annual license and maintenance fee. Currently we have 2 courtrooms so $2,000. We increased the annual cost in Division VI, by $5,000. We increased the cost in Division II by $2,000, reflected by a new daily per diem rate.

For each new courtroom, we will pay $30,000 in install costs, which is actual cost. Previously, $15,000.

These contract costs will remain stable for the remainder of the five year term.

So, increased operating costs this year at most would be $9,000, less as part of the year is over.

Department's Next Steps (if approved):

Work with Procurement and County Attorney to execute contract.

Impact of NOT Approving/Alternatives:

There are no cost-effective alternatives. Alternative include not holding court until a reporter is available or markedly increasing reporter pay to attract potential staff and contract reporters.

To BOS Staff: Document Disposition/Follow-Up:

Notify Eric Silverberg and Niltza Flores in Court Administration.

Attachments

Supplemental Language

First Amendment to Agreement

Amended Cost Sheet

Addendum

This addendum shall be incorporated in the Professional Services Agreement originally executed on February 22, 2016 as X. Miscellaneous Provisions section F.

Any Arizona court or any political subdivision obtaining services described in this Contract for an Arizona court or judicial branch unit is an authorized user of services under this contract. Contractor agrees to provide such services at the Contract prices and under the Contract terms. An authorized user may engage the contractor to perform specific work under this Contract by soliciting a written proposal. Each proposal shall detail the work plan, including assigned staff, deliverables, timeframes and a “not to exceed” cost for the engagement. The authorized user and contractor shall enter a written work order that provides terms and conditions of the engagement not inconsistent with this Contract and incorporates the accepted proposal by reference. Such a work order is subject to termination by the authorized user under the termination provisions of this Contract.

FIRST AMENDMENT TO
AGREEMENT
BETWEEN COCHISE COUNTY AND REVOLUTIONARY TEXT, LLC
FOR REMOTE COURT REPORTING SYSTEM

Cochise County, a political subdivision of the State of Arizona ("County") and Revolutionary Text, LLC ("Consultant"), having previously entered into a Professional Services Agreement for a Remote Court Reporting System, executed in February, 2016 (the "Agreement"), hereby amend that Agreement, for their mutual benefit, as follows:

1. Attachment G to Consultant's response to RFP 16-10-SUP-03, which was accepted by the County and incorporated into the Agreement, is hereby replaced with a new Attachment G which is attached as an exhibit to this First Amendment and incorporated herein by reference, effective as of the date this First Amendment is executed by the parties hereto.

APPROVED:

_____
Ann English, Chair Date
Cochise County Board of Supervisors

APPROVED:

_____
Harvey L. Schulman Date
Chief Operating Officer
RevolutionaryText, LLC

ATTEST:

_____
Arlethe Rios Date
Clerk of the Board

APPROVED AS TO FORM:

_____
Britt Hanson Date
Chief Civil Deputy County Attorney

COST PROPOSAL

REVOLUTIONARYTEXT, LLC RESPONSE TO RFP 16-10-SUP-03

System Install per room	30,000.00	Assumes integration with existing audio equipment.		
Annual Maintenance per room	2,800.00			
Court reporter annual fee per courtroom	50,000.00	Ccourt reporter services are performed for the court reporter salary without benefits. Fee will go up $1,000 each year of the contract.		
Minimum per diem	325.00	This fee is the daily rate charged for those courtrooms not on an annual contract.		
Late cancellation (after 4:00 p.m. local time in Cochise County, AZ) the day prior to the scheduled proceeding	250.00	Applies to rooms used on a per diem or as needed basis.		
Type of Transript -These rates are adjusted periodically by Adminstrstive Order of the court. These rates also apply to staff and per diem reporters.	Price per page O+1 Delivery within 20 days	Price per page Delivery between 4-10 days	Price per page Delivery within 3 days or less	Price per page Copy
Criminal Appeal Rule of Crim.Proc. 31.8	2.50	N/A	N/A	0.30
Criminal PCR's Rule of Crim. Proc. 32.4d	2.50		N/A	0.30
Criminal Non-Appeal (PD/LO/CA/contract attys)	3.50	4.00	5.50	
	extra copies .50	extra copies 1.50	extra copies 1.50	see previous columns
Criminal Non-Appeal private parties	4.00	4.50	5.50	
	extra copies 1.50	extra copies 1.50	extra copies 1.50	see previous columns
County Grand Jury Rule of Crim. Proc. 12.8	2.50	N/A	N/A	0.30
Preliminary Hearing Rule of Crim.Proc. 5.6	2.50	N/A	N/A	0.30
Juvenile Appeal Juvenile Rule 105	2.50	N/A	N/A	0.30
Juvenile Non-Appeal	3.50	4.00	5.50	
	extra copies .50	extra copies 1.50	extra copies 1.50	see previous columns
Civil Appeal Rule of Civil Appeal 11	3.50	N/A	N/A	0.30
Civil on Appeal	4.00	4.50	6.00	
	extra copies 1.50	extra copies 1.50	extra copies 1.50	see previous columns
Civil and Domestic Relations Defaults and Perpetuations Rule of Civil Proc.55(f)	20.00 flat rate (original only)	N/A	N/A	N/A
Transcription from a digital record source only for events not covered by reporter	5.00	5.50	6.00	

Consent 7.

Regular Board of Supervisors Meeting **Finance**

Meeting Date:	08/22/2017		
Demands			
Submitted By:	Melissa Belasco, Board of Supervisors		
Department:	Board of Supervisors		
Presentation:	No A/V Presentation	**Recommendation:**	
Document Signatures:		**# of ORIGINALS Submitted for Signature:**	
NAME of PRESENTER:	n/a	**TITLE of PRESENTER:**	n/a
Mandated Function?:		**Source of Mandate or Basis for Support?:**	

Information

Agenda Item Text:
Approve demands and budget amendments for operating transfers.

Background:
Auditor-General's requirement for Board of Supervisors to approve.

Department's Next Steps (if approved):
Return to Finance after BOS approval.

Impact of NOT Approving/Alternatives:
Board of Supervisors will not be in compliance with State law.

To BOS Staff: Document Disposition/Follow-Up:
Return to Finance after BOS approval.

Budget Information

Information about available funds

Budgeted: ◯	**Funds Available:** ◯	**Amount Available:**
Unbudgeted: ◯	**Funds NOT Available:** ◯	**Amendment:** ☐

Account Code(s) for Available Funds

1:

Fund Transfers

Attachments

No file(s) attached.

Public Hearings 8.

Regular Board of Supervisors Meeting **Board of Supervisors**

Meeting Date:	08/22/2017		
Franchise for L3 LLC			
Submitted By:	Arlethe Rios, Board of Supervisors		
Department:	Board of Supervisors		
Presentation:	No A/V Presentation	**Recommendation:**	Approve
Document Signatures:	BOS Signature Required	**# of ORIGINALS Submitted for Signature:**	1
NAME of PRESENTER:	Britt Hanson	**TITLE of PRESENTER:**	Chief Civil Deputy Attorney
Mandated Function?:	Federal or State Mandate	**Source of Mandate or Basis for Support?:**	40-283

Docket Number (If applicable):

Information

Agenda Item Text:

[ITEM TABLED FROM AUGUST 8, 2017 MEETING]:Adopt Resolution 17-13 granting a Telecommunications and Fiber Optic Services franchise to Level 3 Communications, LLC.

Background:

Level 3 Communications, LLC has applied for a communications/fiber optic franchise in all of Cochise County. The $500.00 franchise fee has been paid and the Acceptance of Franchise has been signed. The Notice of Public Hearing has been published three times as required by statute. To date, there have been no letters or phone calls either for or against granting the franchise.

Department's Next Steps (if approved):

Send a copy of the recorded Resolution, Certificate of Clerk, and the minutes to Katherine Rinehart.

Impact of NOT Approving/Alternatives:

Level 3 Communications LLC would not be able to apply for a permit to work in the county right-of-ways.

To BOS Staff: Document Disposition/Follow-Up:

Record and give recorded copy to BOS Staff for follow up.

Budget Information

Information about available funds

Budgeted: ☐ **Funds Available:** ☐ **Amount Available:**

Unbudgeted: ☐ **Funds NOT Available:** ☐ **Amendment:** ☐

Account Code(s) for Available Funds

1:

Fund Transfers

Attachments

Resolution

RESOLUTION 17-

GRANTING A TELECOMMUNICATIONS SERVICES FRANCHISE TO LEVEL 3 COMMUNICATIONS, LLC

KNOW ALL MEN BY THESE PRESENTS, THAT,

WHEREAS, LEVEL 3 COMMUNICATIONS, LLC has applied and petitioned, pursuant to A.R.S. §§ 40-283, 9-583 B, 40-283 C, 9-583 G.2 and 9-581 et seq., to the Board of Supervisors of Cochise County, Arizona, for the right, privilege, license, and franchise to construct, install, operate, and maintain along, over, under, and across the streets, alleys, and highways, within the County, facilities for the purpose of maintaining and operating a telecommunication system, and all other facilities and improvements necessary for local network and intrastate telecommunications services; and

WHEREAS, LEVEL 3 COMMUNICATIONS, LLC has acquired WILLIAMS COMMUNICATIONS, INC. and has applied to consolidate the franchises into one, under the name of LEVEL 3 COMMUNICATIONS, LLC; and

WHEREAS, reasonable public notice has been provided concerning the Board's intention to grant the requested franchise and of the public hearing on this matter, which is set for August 8, 2017 at 10:00 a.m. at the regular meeting place of the Cochise County Board of Supervisors in the City of Bisbee, Arizona, pursuant to A.R.S. § 40-283; and

WHEREAS, it appears from the affidavit of publication of the San Pedro Valley News-Sun that notice of the date, time, and place set for the consideration of this franchise has been published once a week for three (3) consecutive weeks prior to the date of the public hearing in the following issues: July 19, 2017; July 26, 2017; and August 2, 2017; and

WHEREAS, the hearing having been called as noticed, and the Board of Supervisors having not received a petition requesting the franchise be denied by more than 50% of the qualified electors of Cochise County on or before the date of the public hearing; and

WHEREAS, said franchise application having been considered by the Board of Supervisors at the public hearing on the 8th day of August, 2017, and the Board having found good cause to grant the franchise,

NOW, THEREFORE, the Board of Supervisors of Cochise County having determined that the grant of this franchise is regular, proper, authorized by law, and in the best interest of Cochise County and the inhabitants thereof;

NOW, THEREFORE, IT IS HEREBY ORDAINED:

1. That this Board of Supervisors of Cochise County, Arizona, acting for and on behalf of said County (the "County"), does hereby grant unto LEVEL 3 COMMUNICATIONS, LLC, (hereinafter called "Grantee") a nonexclusive right, privilege, license, and franchise (hereinafter "the franchise") to construct, install, operate, and maintain along, over, under and across the streets, alleys, and highways under the jurisdiction of the County, facilities for the purpose of maintaining and operating a telecommunications system, and all other facilities and improvements necessary for telecommunications. This grant does not include the authorization to use State highways and those areas within the corporate boundaries of any city or town. This grant is subject to the terms, conditions, and limitations expressed below or incorporated herein by reference.

2. The County reserves the right to impose future restrictions, limitations and conditions upon the exercise of the rights granted herein as it deems best for the public safety and welfare, which shall be applied on a competitively neutral and non-discriminatory basis. The Grantee is further required to comply with all lawful, applicable ordinances of Cochise County regulating the conduct of work within the public rights-of way; as such ordinances are now enacted or may be amended or adopted from time to time. The Grantee is required to obtain a separate Right-of-Way Use Permit from the County prior to initiating any construction in the right-of-way and to pay the applicable fees for the associated inspections.

3. The franchise granted hereby shall not be exclusive, and nothing herein shall be construed to prevent the County from granting other like or similar franchises to any other person, firm, or corporation.

4. The Grantee shall bear all expenses and costs, including damages and compensation for any alteration of the direction, surface, grade, or alignment of a public roadway made for the purpose of this franchise or for revenues lost by the Grantee that may arise in connection with its exercise of the rights granted herein.

5. The Grantee shall erect, construct, and maintain all facilities authorized herein in a good and workmanlike manner and in compliance with all applicable valid laws, ordinances, and regulations, which may be in force from time to time. All such work shall be performed in such a manner as may be reasonably necessary to avoid any unreasonable damage, disturbance, or modification to existing public rights-of-ways, including roads, streets, highways, bridges, borrow ditches or shoulders thereon.

6. The Grantee shall, immediately upon erecting, constructing, replacing or repairing its facilities, or any part thereof, at its own cost and expense, restore any effected public right-of-way, including any road, street, highway, bridge, borrow ditch or shoulder thereon, to not less than the same condition which existed prior to the Grantee's action.

7. The County does not waive or relinquish any rights it may have to the full and complete use of the public rights-of-way subject to this franchise, whether for road purposes or otherwise. The rights of the County in and to the use of the right-of-way are, and shall be, paramount and superior to the rights of the Grantee. In the event that the location of the Grantee's facilities may interfere or conflict with the County's use, expanded use, alteration, improvement, or maintenance of the County's rights-of-way, the County may require the Grantee to relocate, at the Grantee's expense, all facilities which give rise to such interference or conflict. The County will provide the Grantee with reasonable notice of any relocation requirement and will provide a reasonable period of time for the Grantee to perform such relocation.

8. The Grantee assumes the sole responsibility for all liability for any injury or damage to any person or property, or to the road and right-of-way itself, caused by or arising out of the exercise of the rights granted herein and attributable to any act or commission of the Grantee. The Grantee shall indemnify, defend and hold harmless Cochise County, its officers, departments, employees and agents from and against any and all suits, actions, legal or administrative proceedings, claims, demands or damages of any kind or nature, including all reasonable costs of legal defense, arising out of the exercise of these rights which are attributed to any act or omission of the Grantee, its agents,

employees, or anyone acting under its direction, control, or on its behalf. The County shall indemnify, defend and hold harmless Grantee, its officers, departments, employees and agents from and against any and all suits, actions, legal or administrative proceedings, claims, demands or damages of any kind or nature, including all reasonable costs of legal defense, arising out of the exercise of these rights which are attributed to any act or omission of the County, its agents, employees, or anyone acting under its direction, control or on its behalf.

9. The County grants this franchise for a term of five (5) years from the date of its authorization by the County and may be renewed pursuant to A.R.S. §9-583. This franchise may not be sold, leased, assigned, conveyed or transferred in any manner, in whole or in part, including pursuant to the sale or merger of the Grantee itself, without the express written consent of the County, which consent shall not be unreasonably withheld, conditioned or delayed. Notwithstanding any provision in this agreement to the contrary, Grantee shall have the right to assign this franchise to any parent, subsidiary, affiliate, or any person, firm, or corporation that shall control, be under the control of, or be under common control with Grantee, or to any entity into which Grantee may be merged or consolidated or which purchases all or substantially all of the equity of Grantee or of the assets of the Grantee that are subject to this franchise. Notwithstanding anything contained herein to the contrary, Grantee may, without County's consent, provide capacity across Grantee's facilities to a third party as long as management and control of the facilities remain with Grantee.

10. The County reserves the right to alter or amend the terms of this franchise in any manner necessary to protect the safety or welfare of the public or the public interest. This reservation includes, but is not limited to, the authority to impose such amended franchise fees, rentals or use payments, or other form of compensation or assessment as the County may be authorized, now or in the future, to impose under the laws of the State of Arizona and the United States.

11. The County may terminate this franchise in the event that the Grantee fails to comply with the material terms and conditions of this franchise. The Board of Supervisors, or its designee, shall provide the Grantee with written notice of noncompliance and allow the Grantee a period of not less than sixty (60) days to remedy any breach. If the Grantee continues to fail to comply with the terms of this franchise after this notice and remedy period, the Board of Supervisors may, following a public hearing, revoke all rights granted herein and render this franchise null and void. Grantee

may terminate any site license or permit granted hereunder for convenience upon thirty (30) days written notice to County.

12. Upon termination of the franchise, whether by expiration of its term, or for cause, or by voluntary abandonment, and after written notice from the County, the Grantee shall remove all of its facilities installed pursuant to the rights granted herein within one hundred eighty (180) days of such termination, and shall repair any damages caused thereby. All such facilities which are not removed within this period shall be deemed to be abandoned and shall become the property of the County.

13. This franchise will not be effective for any purpose until the Grantee has indicated its acceptance in writing below.

14. The rights, privileges, and franchise granted herein are made pursuant to the laws of Arizona, including A.R.S. §§ 40-283 and 9-581 et seq., which are incorporated herein by reference.

IN WITNESS WHEREOF, the Board of Supervisors of the County of Cochise, State of Arizona, has caused these presents to be executed and signed by the Chairman of the Board of Supervisors on this 8th day of August, 2017.

_____
Ann English, Chairman
Cochise County Board of Supervisors

ATTEST:

_____
Arlethe G. Rios
Clerk of the Board

APPROVED AS TO FORM:

_____
Elda E. Orduño
Civil Deputy County Attorney

RESOLUTION 17- **ACCEPTANCE OF FRANCHISE**

Re: Granting A Telecommunications Services Franchise To Level 3 Communications, L.L.C.

This is to certify that the Grantee, **LEVEL 3 COMMUNICATIONS, L.L.C.**, has on this 16th day of August, 2017, accepted the foregoing franchise. Grantee agrees that it will be bound by, observe, and carry out the terms and conditions of this franchise.

GRANTEE:

Dated: 8-16-17

By: Janet Kennedy

Title: SR Manager WNS

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CERTIFICATE OF CLERK

I, **ARLETHE G. RIOS**, Clerk of the Board of Supervisors of Cochise County, Arizona, do hereby certify that the foregoing excerpt from the minutes of the meeting of the Board of Supervisors of Cochise County, Arizona, held on _____, 2017, constitutes a true and correct copy of the said minutes insofar as they relate to the Application of LEVEL 3 COMMUNICATIONS, L.L.C., for a telecommunications services franchise in the County and to the granting of said telecommunications services franchise pursuant to the resolution hereinabove set out, all as appears in the official records of the Board of Supervisors.

IN WITNESS WHEREOF, I have set my hand and official seal of the Board of Supervisors of Cochise County, Arizona, this _____ day of _____, 2017.

_____

Arlethe G. Rios, Clerk of the Board
Cochise County, Arizona

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Action 9.

Regular Board of Supervisors Meeting **Board of Supervisors**

Meeting Date:	08/22/2017		
DPS MOU Border Strike Task Force			
Submitted By:	Arlethe Rios, Board of Supervisors		
Department:	Board of Supervisors		
Presentation:	No A/V Presentation	**Recommendation:**	Approve
Document Signatures:	BOS Signature Required	**# of ORIGINALS Submitted for Signature:**	2
NAME of PRESENTER:	Brian McIntyre/Kenny Bradshaw	**TITLE of PRESENTER:**	County Attorney/Jail Commander
Mandated Function?:	Not Mandated	**Source of Mandate or Basis for Support?:**	

You will use this Agenda Item template if your item involves a Grant (whether a new or renewal grant). You also must attach the Grant Approval Form to the item before Finance will approve it. Select the SPECIAL LINKS on your left-hand menu and Click on "Grant Approval Form". Then complete the form, save it and attach it to your item (on the Attachments tab).

Information

Agenda Item Text:

Approve Memorandum of Understanding 2017-081 between the Department of Public Safety and Cochise County in the amount of $166,666 to be used for prosecutorial and jail expenses incurred from individuals charged with drug trafficking, human smuggling, illegal immigration and other border related crime.

Background:

The State of Arizona, administered through the Department of Public Safety, has provided funding in the amount of $166,666 to reimburse for costs incurred due to enforcement, incarceration and prosecution of individuals arrested for smuggling in Cochise County.

These funds will be disbursed in two increments, one after 10/1/17 and the other after 4/1/18.

Department's Next Steps (if approved):

Utilize funds as approved to reimburse for costs associated with smuggling.

Impact of NOT Approving/Alternatives:

Cochise County will not be provided with $166,666 that can be used for the mentioned costs, thereby having to fund these out of the general fund.

To BOS Staff: Document Disposition/Follow-Up:

Please return signed copies for continued processing thorough DPS.

Budget Information

Information about available funds

Budgeted: ☐ **Funds Available:** ☐ **Amount Available:**

Unbudgeted: ☐ **Funds NOT Available:** ☐ **Amendment:** ☐

Account Code(s) for Available Funds 1:

Fund Transfers

Attachments

MOU

Grant Approval Form

DPS CONTRACT NO: 2017-081

MEMORANDUM OF UNDERSTANDING
REGARDING BORDER STRIKE TASK FORCE

This Memorandum of Understanding ("MOU") is entered into between the State of Arizona through its Department of Public Safety, hereinafter referred to as "DPS", and Cochise County.

This MOU serves as notification for the release of funds granted to Cochise County by the Arizona Legislature and passed through DPS to be used for prosecutorial and jail expenses incurred from individuals charged with drug trafficking, human smuggling, illegal immigration and other border related crime.

I. PARTICIPATION

DPS agrees to provide Cochise County with $166,666 pursuant to Laws 2017, Chapter 305.

Cochise County agrees to utilize the funding solely for prosecutorial and jail expenses incurred from individuals charged with drug trafficking, human smuggling, illegal immigration and other border related crime.

Cochise County certifies its agencies will comply with A.R.S. §11-1051 to the fullest extent of the law.

II. FUNDING

DPS shall disburse $166,666 to Cochise County in two payments as follows:

- $83,333 after October 1, 2017
- $83,333 after April 1, 2018

III. REPORTING REQUIREMENT

By April 30, 2018, Cochise County shall provide a report to DPS that details actual expenditures, accounting obligations, and planned expenditures of the funds provided by this agreement. The report shall reflect activity for the full award amount as of March 31, 2018.

Expenditures, accounting obligations, and planned expenditures shall be reported by the following line items: Personal Services, Employee Related Expenditures, Professional and Outside Services, Travel In-State, Other Operating Expenditures, Capital Equipment, Non-Capital Equipment, and Miscellaneous. The line items shall be as defined by the State of Arizona, as found at https://gao.az.gov/sites/default/files/SAAM-4c00-20140701.pdf. The "Miscellaneous" category shall encompass all line items defined by the State of Arizona that are not explicitly listed herein. In addition to the line item reporting, Cochise County shall provide a brief narrative description of the expenditures, obligations, and planned expenditures. The narrative shall explain what was purchased, obligated, and/or planned, what has been accomplished with expenditures to date, and what is planned to be accomplished with future expenditures.

IV. NON-AVAILABILITY OF FUNDS

Every payment obligation of the State under this Agreement is conditioned upon the availability of funds appropriated or allocated for the payment of such obligation. If funds are not allocated and available for the continuance of the Agreement, this Agreement may be terminated by the State at the

end of the period for which funds are available. No liability shall accrue to the State in the event this provision is exercised, and the State shall not be obligated or liable for any future payments or for any damages as a result of termination under this paragraph.

V. NON-DISCRIMINATION

The Parties shall comply with Executive Order 2009-09, which mandates that all persons, regardless of race, color, religion, sex, age national origin or political affiliation, shall have equal access to employment opportunities, and all other applicable State and Federal employment laws, rules, and regulations, including the Americans with Disabilities Act. The Parties shall take affirmative action to ensure that applicants for employment and employees are not discriminated against due to race, creed, color, religion, sex, national origin or disability.

VI. ARBITRATION

The parties to this agreement agree to resolve all disputes arising out of or relating to this agreement through arbitration, after exhausting applicable administrative review, to the extent required by A.R.S. § 12-1518 except as may be required by other applicable statutes.

VII. RECORDKEEPING

All records regarding the MOU must be retained for five (5) years after expiration of the MOU in compliance with A.R.S. §35-214, entitled Inspection and Audit of Contract Provisions.

VIII. EFFECTIVE DATE/DURATION

The term of this MOU is July 1, 2017 through June 30, 2018. Should the State Legislature reduce or eliminate the appropriation for this program, DPS may cancel or modify this MOU.

IX. CANCELLATION

All parties are hereby put on notice that this MOU is subject to cancellation by the Governor for conflicts of interest pursuant to A.R.S. §38-511.

X. COMMUNICATION

Any notice required to be given under the MOU will be provided by mail to:

Lt. Colonel Ken Hunter
Arizona Department of Public Safety
P. O. Box 6638, Mail Drop 1350
Phoenix, Arizona 85005-6638

Ms. Ann English, Chairman
Cochise County Board of Supervisors
1415 Melody Lane, Building G
Bisbee, Arizona 85603

XI. VALIDITY

This document contains the entire understanding between the parties and may not be modified, amended, altered or extended except through a written amendment signed by both parties. If any portion of this MOU is held to be invalid, the remaining provisions shall not be affected.

The parties hereto have caused this MOU to be executed by the proper officers and officials.

ARIZONA DEPARTMENT OF PUBLIC SAFETY

By: Kenneth Hunter for Date: 8/1/17
Frank L. Milstead, Colonel
Director

APPROVED AS TO FORM

Date: 7/21/17
Assistant Attorney General

COCHISE COUNTY

By: _____ Date: _____
Ms. Ann English, Chairman
Cochise County Board of Supervisors

COCHISE COUNTY GRANT APPROVAL FORM

Form Initiator: Date Prepared:

Point of Contact: Phone Number:

Department:

PRIMARY GRANT

Primary Grantor: CFDA: www.CFDA.gov

Grant Title:

Grant Term From: To: Total Award Amount:

New Grant: Yes No Grant No:

Amendment: Yes No Amendment No:

GL Account No: If new, Finance will assign a fund number.

Strategic Plan: District: Mandated by Law Yes No

Number of Positions Funded:

Asset(s) Acquired:

Grantor's reimbursement mileage rate:

Health or pension reimbursement: Other reimbursement:

Briefly describe the purpose of the grant:

If this is a mandated service, cite the source. If not mandated, cite indications of local customer support for this service.

PRIMARY FUNDING SOURCE

Funding Year: Federal Funds 332.100

State Funds 336.100

County Funds 391.000

Other Funds:

Total Funds:

Has this amount been budgeted? Yes No

Method of collecting funds: Lump Sum Quarterly Draw Reimbursement

Is revertment of unexpected funds required at the end of grant period? Yes No

(a) Total indirect (A-87) Cost Allocation: (b) Amount of overhead allowed by grant:

County Subsidy (a) - (b) =

Is there a Secondary Grant Award associated with this Grant? Yes No

Name of Grant: Funder:

If yes please complete an additional grant approval form.

Is County match required? Yes No

County match source:

County match dollar amount or percentage:

NOTE: Please attach this Grant Approval form to the AgendaQuick item. The AgendaQuick "Grant Approval template" must be used. Once approved by the Board of Supervisors, the department is responsible for sending a copy of the fully executed GRANT DOCUMENT *(not this approval form)* to the Finance Department.

Action 10.

Regular Board of Supervisors Meeting **Community Development**

Meeting Date:	08/22/2017		
Road Design & Construction Standards Update			
Submitted By:	Karen Lamberton, Community Development		
Department:	Community Development	**Division:**	Highway
Presentation:	PowerPoint	**Recommendation:**	Approve
Document Signatures:	BOS Signature Required	**# of ORIGINALS Submitted for Signature:**	1
NAME of PRESENTER:	Karen Lamberton, AICP	**TITLE of PRESENTER:**	County Transportation Planner
Docket Number (If applicable):			
Mandated Function?:	Federal or State Mandate	**Source of Mandate or Basis for Support?:**	A.R.S. 11-251(4)

Information

Agenda Item Text:

Adopt Resolution 17-17 updating the Cochise County Road Design and Construction Standards and Specifications for Public Improvements.

Background:

A key recommendation of the 2040 Long-Range Transportation Plan, completed in March of 2016, was to initiate an update to the 2003 (minor amendments in 2005 and 2016) *Road Design & Construction Standards & Specifications for Public Improvements.* In January of 2017, Cochise County obtained a planning grant from the Sierra Vista MPO to undertake this desired update. This 2017 update includes six revised roadway typical sections, one new roadway cross-section (for an unpaved rural minor access local road) and 40 updated design details along with revised narrative and specifications consistent with nationally recognized standards and procedures.

A Board Work Session was held on June 13, 2017 to discuss the recommended revisions. Outreach was then undertaken to solicit feedback from professional engineering firms, contractors, agencies and advocacy groups. Feedback was incorporated into a final document and the County Engineer recommends approval of the 2017 update to the County's *Road Design & Construction Standards & Specifications for Public Improvements.*

Department's Next Steps (if approved):

If approved, this 2017 update will be posted as a searchable PDF on the County's website, along with a Word version of the specifications for contractor's ease of use for design and construction. Hard copies of the update will be printed and distributed to staff and, upon request, to design engineers and contractors. Three handouts will be finalized for public use on the required standards for residential driveways, commercial driveways and sight distance triangles (clear zones).

The County's roadways will be re-classified into the updated roadway designations as described in Section B and shown on the roadway typical sections in Section D. This effort will help to inform the Board on future decisions regarding infrastructure investments.

The 2017 updated design standards and specifications, upon adoption, will be applied to any new major infrastructure improvement or new construction of public roads within the County. Projects that are currently under design may continue to use the old standards for a short transitional grace period.

Impact of NOT Approving/Alternatives:

If not approved, the County will continue to use the existing Road Design Standards & Specifications adopted in 2003 and as amended in 2005 and 2016. If the County continues to use our old standard the value of the grant received would be negated; staff time expended towards this effort would have been wasted; citizen input would be dismissed; future infrastructure development in the County would be designed based upon an outdated document and revised details and standards that are more effective would not be required to be used.

To BOS Staff: Document Disposition/Follow-Up:

Obtain Board signature on the Resolution and Record the Resolution.
Please send one copy of the recorded Resolution to Karen Lamberton, County Transportation Planner, Highway Dept.

Attachments

DesignStandards2017
Resolution
OutreachSummary
UpdatePresentation

COCHISE COUNTY
Highway & Floodplain

Road Design & Construction Standards & Specifications For Public Improvements

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2017 EDITION

Acknowledgments

Cochise County extends thanks to the County's engineering and operation staff and to the professional consultants and contractors that provided valued input into this 2017 update.

This Cochise County Road Design Standard Update was supported by a Planning grant from the Sierra Vista Metropolitan Planning Organization (MPO) & the Arizona Department of Transportation (ADOT).

Special recognition to our Cochise County's Supervisors
Patrick Call, Ann English and Peggy Judd

Prepared under the direction of Karen Riggs, P.E., County Engineer and Highway/Floodplain Director with support from:

Sierra Vista Metropolitan Planning Organization
Southeastern Area Council of Governments
Arizona Dept. of Transportation-Transportation Planning, Southeast & Southcentral Districts
Works Consulting, for providing county-wide traffic count data and maps

And for exemplary technical assistance in converting the 2005 version into editable AutoCAD and engineering expertise our thanks is also extended to the team at Kimley-Horn under the leadership of Allen Hathcock, P.E., Project Manager

ACRONYMS

AASHTO	American Association of State Highway and Transportation Officials	Ft	Foot/Feet
AB	Aggregate Base *(used in this document to refer to both Aggregate Base and to the subsequent pavement section, also known as Aggregate Base Course)*	ITE	Institute of Transportation Engineers
		in.	Inch/Inches
AC	Asphalt Concrete	LOS	Level of Service
ADOT	Arizona Department of Transportation	MAG	Maricopa Association of Governments
AADT	Annual Average Daily Trips	mph	Miles per Hour
ADEQ	Arizona Department of Environmental Quality	MUTCD	Manual on Uniform Traffic Control Devices
ADT	Average Daily Trips	NCHRP	National Cooperative Highway Research Program
ADWR	Arizona Department of Water Resources	PCC	Portland Cement Concrete
A.R.S.	Arizona Revised Statute	RV	Recreational Vehicle
AZPDES	Arizona Pollutant Discharge Elimination System	SEAGO	South Eastern Arizona Governments Organization
CCH&FD	Cochise County Highway & Floodplain Department	SVMPO	Sierra Vista Metropolitan Planning Organization
Cfs	Cubic Feet per Second	TBST	Triple Bituminous Surface Treatment
DBST	Double Bituminous Surface Treatment; Chip-Seal	TRB	Transportation Research Board
FHWA	Federal Highway Administration	USDOT	United States Department of Transportation
Fps	Feet per Second		

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COCHISE COUNTY

Road Design & Construction Standards
& Specifications for Public Improvements

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SECTION A

INTRODUCTION

1. PURPOSE

The purpose of the Road Design & Construction Standards & Specifications for Public Improvements manual (hereafter Cochise County Design Standards) is to provide consistent design standards and specifications for the roadway network in Cochise County. It is also supports the specific infrastructure management goal of Cochise County's (County) Strategic Plan to prudently manage and preserve the County's infrastructure investments.

Cochise County has long had operations and maintenance manuals to guide the County's roadway network development but it was not until the 1970s that County Engineers began to sign and seal specific details for general use. Prior to 1978, County highway work was under the direct supervision of each of the County Supervisors. Resolution 78-44 delegated this authority to the County Engineer and, six years later, Resolution 84-80 designated a Floodplain Control Board and appointed a Floodplain Engineer. Under their guidance previous roadway typical sections and construction details were combined into a 1996 Design Standard Handbook. The Board of Supervisors formally adopted Cochise County Design Standards in May of 2003. Revisions were undertaken in April 2005 and again in October of 2005. This 2017 update was adopted by the Board of Supervisors on *Month, Date, Year.*

When the application of a standard or specification is required, the words "must" or "shall" are used. When there is flexibility, the words "may" or "should" are used. This update reflects the experience of Cochise County highway/floodplain engineers and operations foremen, changes in applicable standards and publications, and evolving policies and practices regarding the County's transportation infrastructure.

These Design Standards may not apply to all situations. They are intended to assist the professional engineer's competent work but not to substitute for it. It is recognized that each roadway project is likely to have conditions that require site-specific treatment. These Design Standards are not a substitute for the design engineer's experience, professional judgment, comprehensive understanding of the referenced material, or ongoing communication with reviewers.

These Design Standards are also not intended to unreasonably limit any innovative or creative effort that might result in higher quality or cost savings for the public. Proposed variances from these adopted standards must be submitted to the Cochise County Engineer and approved before the project design is finalized. In the event of differences between these Design Standards and the scope of work or provisions of an executed County design contract, the executed contract shall govern.

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2. APPLICABILITY

These Design Standards shall govern all construction and reconstruction of transportation facilities in County Right-of-Way or Right-of-Way that is intended to be dedicated to Cochise County.

The functional classification, future traffic characteristics (vehicle types and volumes), and topography of the area are the basic criteria used to determine the design standards to be used.

Before the County accepts a road into the County Road System for maintenance, it shall meet the standards contained herein. If field conditions change after plan approval, improvements shall be made, as necessary, to bring the transportation facilities up to these standards. These standards should be used by private parties, land development engineers, consulting firms, public utilities and agencies, and the Cochise County Highway and Floodplain Department (CCH&FD) staff. New roads or other public improvements will only be considered for acceptance into the County's maintenance system if they have direct access to another County-maintained road or another road that is maintained by a governmental entity.

These Cochise County Design Standards do not apply to routine maintenance, preservation, rehabilitation, or reconstruction of existing County-maintained roads that do not meet these standards.

For the purposes of these Cochise County Design Standards, the following definitions for maintenance, preservation, rehabilitation/reconstruction, and construction shall be used:

- Roadway maintenance is defined as any work that is preformed to maintain the condition of the roadway or to respond to specific conditions or events that create a need to restore the roadway to a functional state of operation.
- Roadway preservation is defined as any work that is planned and performed to improve or sustain the condition of the roadway in a state of good repair. Preservation activities generally do not add capacity or structural value, but do restore the overall condition of the roadway.
- Roadway rehabilitation or reconstruction is defined as any work that extends the service life of existing roadways either by restoring or reconstructing the pavement surface. Such work may include scarifying and mixing deteriorated pavement structure into a compacted sub-base or repair of age-related cracking of pavement surface with treatments like crack sealing, slurry seals, or micro-surfacing techniques.
- Roadway construction is defined as any work that changes the geometric prism or surface type of the roadway or completely removes and replaces the existing pavement structure. Such work may include roadway widening, chip seal on existing gravel/dirt surfaces, overlays greater than two inches, and major drainage improvements.

3. VARIANCE REQUESTS

Variances from these Design Standards may only be granted by the Cochise County Engineer. Any proposed departure from these standards will be judged on if the requested variance is in the

public interest and would not compromise public safety or the County's infrastructure investment. A request for a variance must be made in writing and include the following:

1. Standard or specification requested to be varied;
2. Alternative design or construction standard proposed;
3. Why the request is being made; and
4. Justification for the request – specifically addressing the potential impact on the public infrastructure system (safety, functionality, maintainability).

Documentation and exhibits to support the request must be included. Additional information, studies, reports, and/or alternative design, sealed by a civil engineer licensed to practice in Arizona, may be requested by the County Engineer prior to making a decision on the variance request. A written decision will be conveyed within 20 business days after receipt of a complete submittal.

4. DEVELOPMENT OF PLANS AND SPECIFICATIONS

Except where these standards provide otherwise, testing, report preparation, principles, practices, design, design details, workmanship, construction, and materials shall be in accordance with the latest edition and current revision of the following publications:

- A Guide for Erecting Mailboxes on Highways, as distributed by the American Association of State Highway and Transportation Officials (AASHTO)
- A Policy on Geometric Design of Highways and Streets, as distributed by AASHTO and defined in this document as AASHTO Green Book
- Arizona Department of Transportation (ADOT) Traffic Control Design Guidelines
- Arizona Manual of Approved Signs (MOAS), as distributed by ADOT
- Arizona Supplement to the Manual on Uniform Traffic Control Devices (MUTCD) for Streets and Highways, ADOT
- Cochise County Floodplain Regulations, Cochise County Flood Control District
- Design of Riprap Revetment, Hydraulic Engineering Circular 11 (HEC-11), as distributed by U.S. Dept. of Transportation (USDOT), Federal Highway Administration (FHWA)
- Guide for the Development of Bicycle Facilities 2012, 4th Edition, published by AASHTO
- Guidelines for Geometric Design of Very Low-Volume Local Roads (Average Daily Traffic [ADT] ≤ 400 vehicles per day [vpd]), as distributed by AASHTO
- Highway Capacity Manual, as distributed by the Transportation Research Board (TRB)
- Highway Drainage Design Manual, Volume 2, Hydrology, ADOT
- Highway Drainage Design Manual, Hydraulics, ADOT

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- Hydraulic Design of Energy Dissipaters for Culverts & Channels, Hydraulic Engineering Circular 14 (HEC-14), USDOT, FHWA
- Hydraulic Design of Highway Culverts, Hydraulic Design Series (HDS) No. 5, USDOT, FHWA
- MUTCD for Streets and Highways, as distributed by the USDOT, FHWA; and as amended and approved by ADOT
- Materials Preliminary Engineering and Design Manual, prepared by ADOT
- Roadside Design Guide, as distributed by AASHTO
- Roadway Lighting Design Guide, published by AASHTO
- Roundabouts: An Informational Guide, as distributed by USDOT, FHWA
- State Standards, Arizona Department of Water Resources (ADWR) Flood Mitigation Section, SS1-97, SS2-96, SS3-94, SS4-95, SS5-96, SS6-05, SS7-98, SS8-99, SS9-02, SS10-07 and SS10-09
- Traffic Control Devices Handbook, 2nd Edition, or update, as distributed by the Institute of Transportation Engineers (ITE)
- Traffic Engineering Handbook, ITE.
- Traffic Impact Analyses, Section 240 of ADOT Traffic Engineering Guidelines and Processes
- Trip Generation Manual, 9th Edition or update, as distributed by ITE
- Trip Generation Handbook, 2nd Edition or update, as distributed by ITE
- Uniform Standards Specifications and Details for Public Works Construction, sponsored and distributed by the Maricopa Association of Governments (MAG). See Section D and E for Cochise County amendments to MAG Standards.

5. TIME LIMITATION OF CONSTRUCTION PLAN APPROVAL

The approval of road construction plans shall be valid for a period of three years from the date of final design approval by the County. Improvements not under construction within this period must be resubmitted to and reapproved by the County unless a longer time period has been specifically authorized by the County Engineer with the County's original approval.

Requests for extensions must be submitted in writing with appropriate justification warranting such an extension. Road construction plans may be required to be revised to meet with updated standards, if changes have occurred since the date of original approval.

A written decision will be conveyed within 20 business days of receipt of complete submittal.

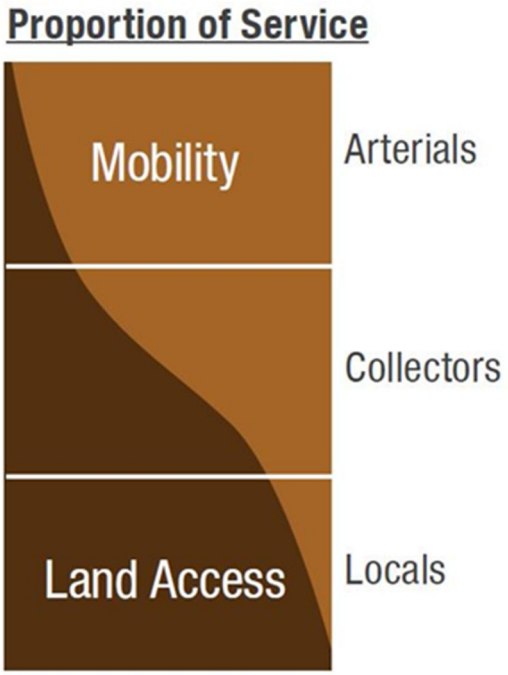
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SECTION B

ROADWAY FUNCTIONAL CLASSIFICATION

1. SYSTEMS AND CLASSIFICATIONS

Functional classification is the system by which rural and urban roads are grouped into classes according to the type of service they are intended to provide. The basic functional systems are arterials, collectors, and local access roads. Travelers use a combination of arterial, collector, and local roads for their trips.



Each type of road has a specific purpose or function. Arterials provide for long-distance travel; collectors provide travel mobility between the higher-volume, higher-speed roads to the lower-volume, residential roads; and local roads connect travelers into the transportation network.

A transportation system consists of each street type, as shown to the right, and described in Table B-1, below.

Table B-1 – Roadway Functional Classification

Functional Classification	Ideal Character and Function of the Roadway	Types
Arterial	Provides the highest level of service at the greatest speed for the longest uninterrupted distance, with some degree of access control. These are the best developed roads within the roadway network.	Serves major activity and economic centers; connects dense urban areas; provides linkages to other arterials; connects to the Interstate system.
Collector	Provides a less highly developed road with a lower speed; collects traffic from local roads and connects them with arterials; provides alternative routes to higher classed roadways.	Serves smaller-scaled activity and economic centers as well as important community traffic generators like schools, specialty retail; provides linkages within the County.
Local	Consists of all roads not defined as arterials or collectors; multiple access points for individual users; lowest speeds for shorter distances on the least developed roads.	Provides access to land with little or no through movement; individualized access at the neighborhood scale; typically serves residential or rural ranch/agricultural areas.

Specific criteria guide the designation of roadways as a Federal Functional Classified roadway, as opposed to a County-level designation. Both a Federal and a County classification

designation serve as a basis for establishing speed limits, design standards, and access controls. However, an important distinction is that the use of most Federal or State funds for roadway improvements is limited to those roadways designated as a Federal Functional Classified roadway.

This section discusses both Federal and County functional classifications for County roadways. There are nine types of roadways that make up the Cochise County transportation network.

Table B-2: Roadway Classifications

Classification	Detail	Roadway Type	Lane Width	Paved Shoulder	Pavement Surface
County	CC010	Commercial/Industrial Road	12' to 20'	2' to 8'	AC
Federal	*By Design*	Minor Arterial Road	12'	8'	AC
Federal	CC011	Major Collector Road	12'	6'	AC
Federal	CC012	Minor Collector Road	12'	4'	AC
County	CC013	County Collector Road	12'	0'	DBST
County	CC014	Major Access Local Road	12'	0'	DBST
County	CC015	Minor Access Local Road	12'	0'	AB
County	CC016	Context Sensitive Road	9'-10'	0'	Native
ARS § 6706	*Not a standard*	Primitive Road	varies	0'	Native

The desired Level of Service (LOS) designations for each County functional classification is used in traffic analysis to support roadway function classifications, sizing of roads, and determining the number of intersection auxiliary lanes that are required during peak hours.

Federal Functional Classification definitions are adapted from the FHWA *Highway Functional Classification Concepts, Criteria and Procedures, Chapter 3, Criteria.*

2. FEDERAL FUNCTIONAL CLASSIFICATIONS

Minor Arterial Road

Minor arterial roads offer connectivity to the State or Interstate system, linking activity and economic centers to the regional network. These roadways are fairly long, cross-jurisdictional boundaries and, together with Principal Arterials (Interstate) carry the largest volume of traffic in the regional network. In Cochise County, these types of roadways are, with the exception of Naco Highway, all on the State Highway system or within the incorporated City of Sierra Vista.

Minor arterial roads consist of roads with the following service characteristics:

A. Link cities and larger towns (and other major destinations capable of attracting travel over long distances) and form an integrated network providing interstate and inter-county service
B. Be spaced at intervals, consistent with population density, so that all developed areas are within a reasonable distance of an arterial roadway

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C. Provide service to corridors with trip lengths and travel density greater than those served by collectors and local roads and with relatively high travel speeds and minimum interference to through movement
D. Annual average daily trips (AADT) 3,000 to 14,000
E. Desired LOS B

Design Standards for this classification will be developed by the Design Engineer, consistent with the reference guidance noted in Section A, and as approved by the County Engineer.

Example: Naco Highway, US 191, SR 92

Major Collector Road

Major Collectors typically connect to State or Interstate routes or provide service to communities not directly served by the State or Interstate systems. They provide access to clustered business areas or community facilities, like schools. Generally, major collector routes are longer in length than most of the roads in a regional network; have higher speed limits; have higher annual average traffic volumes; and have more travel or turning lanes than minor collector roads.

Major collector roads consist of roads with the following service characteristics:

A. Provide service to any county seat not on an arterial route, to the larger towns, or census-designated places not directly served by the higher systems, and to other traffic generators or destinations of intra-county importance
B. Links destinations with nearby larger towns and cities or with arterial routes
C. Serve the most important intra-county travel corridors
D. AADT between 2,600 and 6,300
E. Desired LOS B

See Standard Detail CC011, Major Collector Road for design standards.

Example: Dragoon Rd, Davis Road, Kansas Settlement Road, Charleston Road

Minor Collector Road

Minor collector roads move traffic from local roads to major collectors or arterial roads. They tend to feed residential traffic to higher volume roads but also provide access to local businesses. Generally, minor collector roads have moderate speeds over a fairly long distance but allow for multiple access points.

Minor collector roads consist of roads with the following service characteristics:

A. Provides access to adjacent land
B. Provides service to travel over short distances as compared to higher classification categories
C. In more urbanized areas carries little or no through traffic movement
D. Constitutes the mileage not classified as part of the Arterial and Major Collector systems
E. AADT between 1,110 and 6,300
F. Desired LOS B

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See Standard Detail CC012, Minor Collector Road ADT >2000 for design standards.

Example: Gleeson Road, Noland Road, Apache Pass Rd, Lochiel Road

3. COCHISE COUNTY FUNCTIONAL CLASSIFICATIONS

Commercial/Industrial Road

Commercial/Industrial roads serve heavy industrial employment centers or areas. These types of roads provide access and traffic circulation for sites that have larger volumes of freight that require a stronger pavement section and larger turning radii. They also may be appropriate in urbanizing areas with clustered commercial uses. Commercial/Industrial roads have the following service characteristics:

A. Traffic movements internal to a clustered commercial or industrial site
B. Traffic turning movements are designed for high volumes of freight
C. Development frequently fronts directly on the road
D. Signal spacing is two miles or less
E. Right-of-Way width typically between 80 to 100 feet (ft)
F. AADT over 250
G. Desired LOS B

See Standard Detail CC010, Commercial/Industrial Road for design standards.

Example: Monsanto Drive, DeMuro Drive, Ten Pond Place

County Collector Road

In Cochise County, collector roads tend to connect to state or interstate routes, which are typically classified as arterial routes. These roads can also provide service to larger communities not directly served by the arterial system but do not always generate enough traffic to warrant a federal functional classification in rural areas. County collector routes serve traffic generators of regional importance such as economic generators, ecotourism destinations, or a cluster of community facilities in rural communities. County collector roads consist of roads with the following service characteristics:

A. Two-lane undivided roads with intersections at grade, and allows for individualized access to both commercial and residential parcels
B. Serves traffic movements between local roads and the federally functional classified collector or arterial roads
C. Traffic movements between smaller communities, or locally important traffic generators and developed areas
D. Striped for one lane in each direction
E. Right-of-Way width typically between 80 to 100 ft, depending on drainage
F. AADT between 1,110 to 2,600
G. Desired LOS B

See Standard Detail CC013, County Collector Road for design standards.

Example: Ghost Town Trail, Foothills Drive, Towner Avenue

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Major Access Local Road, Double Bituminous Surface Treatment

Major local roads serve primarily to provide access to adjacent land uses and connect them to collector and arterial roadways. The main function of most local roads is to provide movement for travelers to and from residences. Roads in this classification are maintained by Cochise County and because their higher levels of local traffic, typically over 400 vehicles per day (VPD), a double bituminous surface treatment/chip-seal is preferred. These streets provide direct access to abutting properties and provide access into and through subdivisions.

Major access local roads consist of roads with the following service characteristics:

A. Two-lane undivided paved roads with intersections at grade
B. Traffic movements between collectors and adjacent lands
C. Traffic movements involving relatively short distances
D. Right-of-Way width typically between 60 and 80 ft, depending on drainage
E. AADT between 400 to 1,110
F. Desired LOS A

See Standard Detail CC014, Major Access Local Road, Double Bituminous Surface Treatment for design standards.

Example: Montezuma Canyon Road, Douglas Avenue, Oak Street, Ocotillo Road

Minor Access Local Road, Unpaved, Low Volume

Minor local roads provide access to adjacent land uses and connect them to collector roadways. The primary function of most local roads is to get travelers to and from residences. In the more rural areas of the County these local roads may also serve agricultural and ranching areas.

Local roads in this classification are low-volume unpaved roads that have been declared as a county highway. This standard was developed as an option for rebuilding deteriorating paved surfaced roadways. This standard may be an appropriate interim measure when paving is not feasible due to funding constraints. These roads should serve a minimum of 250 VPD or provide service to key community activity centers, like schools/health clinics or economic generators. These streets provide direct access to abutting properties and connect to collector roadways. This standard may not be used for any new or subdivision roads that are intended to be brought into the County's maintenance system.

Minor local roads typically have the following service characteristics:

A. Two-lane undivided unpaved roads with intersections at grade
B. Traffic movements between collector roads and adjacent lands
C. Traffic movements involving relatively short distances
D. Right-of-Way width between 60 and 80 ft
E. AADT less than 400
F. Desired LOS A

See Standard Detail CC015, Minor Access Local Road - Unpaved, Low Volume for design standards.

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Example: This is a new design standard and no examples of this road cross section currently exist.

Context Sensitive Road, Unpaved, Low Volume

Cochise County has several areas with extraordinary environmental, ecological or culturally significant features. In some cases, these unique areas require additional consideration to balance access and safety with preservation of these valued resources. Flexibility in design standards, allowing accommodation of site specific concerns, may make the use of a Context Sensitive Road standard as the most appropriate design to apply to mitigate potential adverse impacts on the topography, water courses, wildlife habitat, vegetation, cultural resources or the integrity of the area as a whole.

Context sensitive roads are typically unpaved and generally provide local access to residences or public lands. These roadways are signed in a manner consistent with MUTCD, warning the traveling public that they are on a roadway that is only minimally maintained. These may include signs that state "Scenic Road" together with "Narrow Width, Limited Shoulder" with speed limits signs for 25 mph or less. Maintenance of adjacent drainage ditches and shoulders are typically limited to not more than two ft on each side of the roadway.

This standard was developed as an alternative to a minor access local road that would allow, in unique circumstances, a narrow road with reduced clear zones. The development of a context sensitive design for a roadway allows consideration of safety and mobility needs balanced in harmony with an area's unique aesthetic, cultural, or environmental features. This designation requires a finding that a roadway segment meets the criteria of this standard by the County Engineer before being signed and maintained as a context sensitive roadway. This standard may not be used for any new or subdivision roads intended to be brought into maintenance.

Context sensitive roads have the following service characteristics:

A. Unpaved road that does not follow a straight or direct corridor
B. Located in an area with unique characteristics that could be damaged or degraded by construction disturbance
C. Has topographic and/or drainage constraints that limit cross-section lane widths
D. Right-of-Way between 25 ft and 50 ft
E. May potentially be signed for a 25 mph or less speed limit
F. AADT less than 250
G. Requires designation by the County Engineer

See Standard Detail CC016, Context Sensitive Road, Unpaved, Very Low Volume, for maintenance standards.

Example: Ramsey Canyon Road, Turkey Creek Road, Portal Road

Primitive Road, Unpaved, Low Volume

There is one other roadway designation in Cochise County that is not a design standard. It may not be used for the construction of any new roads to be brought into the County's

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maintenance system. Per ARS §28-6705 and ARS §28-6706 the Board of Supervisors may designate roads meeting specific criteria, set forth in the statute, as primitive roads solely for the purposes of limited maintenance activities. Signs warning the traveling public must be posted stating: "Primitive Road, Caution, Use At Your Own Risk. This surface is not regularly maintained".

Primitive roads have the following service characteristics:

A. Defined by State Statute and established per Cochise County Resolution 94-87
B. Limited maintenance is allowed under state statute
C. Primitive roads must be reclassified from this designation by the Board of Supervisors and brought into the County's declared highway system before expending public funds for improvements

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SECTION C

ELEMENTS OF ROADWAY DESIGN

1. DESIGN STANDARDS

This section highlights the important considerations and requirements in designing and preparing plans for new and reconstructed Cochise County roadways. The use of widely accepted industry standards typically reduces design and review timeframes. Reference documents are cited in this section and are also listed in Section A. Note that these documents are revised periodically; therefore, users should use the most recent version of the document specified.

Cochise County minimum design standards are described in the current edition of *A Policy on Geometric Design of Highways and Streets*, published by AASHTO, commonly referred to as the Green Book.

The typical road cross-sections for Cochise County roadways are shown in Section D. For roadways which may be annexed in the near future by a city or town, Cochise County may elect to incorporate elements of the adjacent city's or town's standards into the design.

2. NEW ROADS ACCESSING A COUNTY-MAINTAINED ROAD

A road is any vehicular travelway that serves two or more lots or parcels. New public and private roads accessing a County-maintained road shall require an approved Right-of-Way permit prior to construction.

All roads intersecting a federally functionally classified arterial, major or minor collector road shall do so at a 90-degree angle. All roads intersecting with a county collector or local road shall not vary from the 90 degrees by more than 15 degrees.

Intersecting roads that do not directly align to the common roadway shall have centerline offsets that are a minimum of 200 ft apart on local and minor collector roads and 300 ft apart on all other roads.

At road intersections, the edge of pavement shall be rounded to accommodate turning movements with a minimum radius of 25 ft for county collector and local access roads and maximum radius of 50 ft for federally functionally classified and commercial/industrial roads. When acceleration or deceleration lanes are present, curve radii may be reduced to 25 ft. It may be necessary to round the property line corner(s) to accommodate wide turning movements and/or surface drainage requirements.

The centerline tangents, prior to any horizontal curve, shall be a minimum of 50 ft for local roads and 100 ft for all other roads, measured from the intersected roadway's Right-of-Way line.

The crossover crown of a roadway being intersected shall not exceed an algebraic difference of 4 percent for arterial and collector roads and 8 percent for local roads.

Clear visibility with adequate stopping sight distance, shall be provided to drivers in both directions, along the centerline of all intersecting roads.

Intersections should be located along tangent sections of roadway. In no case shall an intersection be located on or near the inside of a sharp curve.

The provision of exclusive right-turn or left-turn lanes should be considered at major intersections and at locations where safety is significantly improved by providing a deceleration lane for vehicles turning out of the major roadway through lanes to make left or right turning movements onto a cross road or driveway. Turn lane design shall be per ADOT Traffic Engineering Guidelines & Processes 430, Turn Lanes Design. Specific design values and markings for turn lanes are as described by ADOT or MUTCD in reference manuals or as modified in Sec E of these Design Standards.

Roadway Access Apron

The surface type of the roadway apron shall meet or exceed the surface type of the intersected County-maintained roadway. Uncurbed intersections shall include concrete ribbon curb along the radii returns to prevent pavement raveling. See Detail CC205-3.

Any roadway access apron shall be designed to adequately handle roadside drainage. Stormwater from the new roadway should not result in stormwater overtopping any part of the existing County-maintained travelway or cause erosion or deposition within the County Right-of-Way. Any new roadway or roadway access apron should be designed in such a way as to ensure that there is no increase in stormwater drainage onto neighboring properties.

Adequate stopping sight distance shall be provided at all intersections. Both horizontal and vertical curves should be as flat as possible at intersections and driveways where vehicles decelerate, stop, and accelerate.

Obstructions in both the horizontal plane and the vertical plane must be reviewed when designing intersections. Sight triangles identify areas at the corners of intersections of roads and driveways where views of approaching traffic should not be obstructed. Sight distance triangles shall be identified and shown at all road intersections and noted on the final subdivision plat and on commercial site plans, see Detail CC300. These areas are required to remain free of all obstructions that would interfere with a driver's visibility between the heights of 3 ft and 10 ft to include, but not be limited to, structures, trees, shrubbery, and signs. Exceptions are utility poles, fire hydrants, and traffic control signs that cannot be reasonably relocated.

3. DRIVEWAYS

A driveway is any access constructed within the public Right-of-Way, connecting the public roadway with an adjacent property. There are three general driveway categories and corresponding details: Residential Driveways, Detail CC205-1; Commercial Paved Driveways, Detail CC205-2; and Roadway Access Aprons, CC205-3. Roadway access aprons are required for private roads that provide access to two or more parcels.

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A Right-of-Way permit is required prior to construction of a driveway. Though each type has typical guidelines for layout, application, and typical materials, all driveway configurations must receive approval by the County Engineer before installation. General requirements for driveways are listed below, followed by specific requirements for each classification.

Spacing: The location and spacing of driveways has an impact on both safety and capacity of the roadway. The distance between adjacent driveways shall be adequate to allow driveway vehicles to safely queue, accelerate, decelerate, and cross conflicting traffic without excessive interference with through traffic or adjacent driveway traffic. Whenever possible, it is preferred that driveways align directly across from any other established driveway on the opposite side of the roadway.

A minimum of 150 ft, measured at the Right-of-Way line, shall separate the nearest pavement edge of any entrance or exit driveway onto any commercial/industrial, major, minor, or county collector road and the nearest intersecting road. Driveways onto local access or context sensitive roads shall be a minimum of 50 ft from the nearest intersecting road. Driveways near median openings shall either be centered with the center of the median opening or be a minimum of 100 ft from the median opening. Joint access will be required for two adjacent developments where a proposed new access will not meet these spacing requirements.

Length and Width: The design of a driveway should consider the space necessary to accommodate all vehicles using the driveway (adequate storage length). This applies to both vehicles making a left turn from the roadway and to vehicles stopped on the driveway waiting to enter the roadway. The potential for larger vehicles, such as recreational vehicles (RVs) or livestock trailers, should be taken into account in the driveway design.

Skew: Driveway design shall seek to make the driveway alignment at a 90-degree angle (perpendicular) to the road they are accessing. When parcel circumstances cannot accommodate 90 degrees, a reduction of less than 90 degrees, to a minimum of 60 degrees, may be considered for approval by the County Engineer.

Sight Distance: Adequate sight distance shall be provided for vehicles exiting and entering a driveway. The location should be evaluated to determine whether a sight obstruction exists, such as buildings, signs, vegetation, parked vehicles, or horizontal or vertical roadway alignments, etc. In all cases, stopping sight distance for the approaching traffic on both sides of the accessed roadway shall be provided. See Detail CC300.

Vertical Alignment/Grades: Adequate design of driveway grades should reflect consideration for the basic functions of the adjacent street and the site that the driveway serves. Sufficient clearance between the vehicle and the driveway surface must be provided.

Drainage: Adequate drainage shall be provided at each driveway and consider the surrounding terrain, on- and off-site flows and the capacity needs (or requirements) for any drainage structures. Drainage structures shall be provided under driveways when necessary. Flows that can be accommodated with less than the minimum 18-in. culvert size may use a

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concrete or paved low-flow drainage crossing, see Detail CC205-4. The Design Engineer shall provide details of the ditch or channel design and the embankment slopes with any protection requirements, including rip rap gradation.

A. Residential Driveways

Residential driveways typically provide access to one single-family residence. These driveways can be chamfered or have radii, and may be constructed of native or stabilized earth. Residential driveways may also be constructed of many different types of materials including gravel, concrete, Aggregate Base (AB), Chip-Seal (DBST), and Asphalt Concrete (AC). Driveways within new subdivisions shall be consistent throughout the subdivision, as approved by the County Engineer.

Residential driveway return radii shall be 4 ft to 10 ft for intersection roadway speeds of 35 mph or less and 25 ft for greater than 35 mph. Radii or chamfers if used, must remain within the projection of the subject parcel's property lines and shall not encroach upon any part of adjacent properties. The standard driveway width ranges from 12 ft minimum to 30 ft maximum. Preferred residential driveway width is 16 ft.

New residential driveways on parcels that have potential for access onto two different roadways (e.g. corner lots) shall place the access on the street with the lesser classification. Parcel access would be constructed onto the local road instead of the higher-volume collector road to preserve the higher speeds on the higher-volume roadways.

See Detail CC205-1 RESIDENTIAL DRIVEWAYS for additional information and requirements.

B. Commercial Driveway

Commercial driveways typically provide access to an office, retail, or institutional building or to clustered residential units, such as an apartment building. Commercial and industrial driveways must take into consideration the needs of truck traffic and shall be designed using the appropriate turning template. These driveways can be chamfered or have radii, and can be constructed of different types of hard-surfaced materials including concrete, Aggregate Base (AB), Chip-Seal (DBST), and Asphalt Concrete (AC). For these driveways, the pavement surface must match, or be more durable than, the connecting roadway.

Commercial driveways shall have a minimum return radius of 35 ft, with a maximum return radius based on the specific traffic needs of the commercial land use. Radii or chamfers must remain within the projection of the subject parcel's property lines and shall not encroach upon any part of adjacent properties frontage on the roadway.

Commercial driveways shall have a minimum width of 16 ft. A two-lane commercial driveway minimum to accommodate one-way traffic on and off the site is 24 ft in width and a maximum of 40 ft. Driveways having three or more lanes shall follow the design standards for street intersections. Where necessary for the safe and efficient movement of traffic, the County may require a Traffic Report (Traffic Impact Statement or Traffic Impact Analysis) with specific recommendations and design for the access driveway(s). These types of driveways may be required to be geometrically designed to provide for only limited turning movements.

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The vertical profile of a driveway should allow a smooth transition to and from the roadway. A minimum 20-ft-long landing area, of no greater than 3 percent slope, shall be provided for commercial/industrial driveways.

Construction of curb, gutter, sidewalk, or pathway may be required as a condition of commercial permit approval. MAG Detail 220-1 Curb and Gutter, Type B ribbon curb is typically desired for commercial driveways constructing curb and gutter. Commercial driveways that are taking access from a commercial/industrial road or from a major or minor collector roadway shall either continue curb and gutter or provide for a flush ribbon curb 6 in. to 12 in. wide and 12 in. to 18 in. deep.

See Detail CC205-2 COMMERCIAL PAVED DRIVEWAYS for additional information and requirements.

C. Driveway Access for Multiple Parcels

Private roads that provide access to two or more residential parcels shall provide a roadway access apron in lieu of a single-use driveway. See Detail CC205-3 ROADWAY ACCESS APRON and reference the information in this section 2A: Roadway Access Apron for additional information and requirements.

4. UTILITIES WITHIN PUBLIC RIGHT-OF-WAY

This section applies to all public and private utilities including, but not limited to, electric power; gas; water; sewer; cable television; irrigation; and communications networks such as, but not limited to, telephone or fiber optics; and similar facilities that are located on and under roadways on the County's maintained roadway network.

All new overhead utility lines, utility poles, and other above-ground utility structures shall be constructed outside the clear zone of the roadway. Underground utilities shall be constructed outside the paved areas of the roadway section (except for crossings). Fire hydrants shall be located a minimum of 6 ft from back of curb, 1 ft from back of sidewalk, or 10 ft from edge of pavement, if no curb is present. Utility poles and any other above-ground streetscape elements shall be located within 5 ft of the Right-of-Way line or 10 ft from the travel lane, whichever is most restrictive. Warning tape shall be installed a minimum of 1 ft above underground utilities.

Where it is necessary for underground utility lines to cross a roadway, the crossing for such utility lines shall be constructed per Cochise County Design Standards Section E: Specifications and per the Right-of-Way permit. Existing and new underground utility and culvert locations shall be appropriately shown in paving and drainage profiles.

5. DESIGN CONSIDERATIONS

This section provides information about design features that should be considered when assessing a site and preparing public infrastructure plans. These include, but are not limited to,

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site traffic circulation, multimodal connections and amenities, roadway clear zones, roadway lighting, need for traffic signals or regulatory signs, and other features that may be needed for a complete design (cattle guards, guard rails, medians, pavement striping).

A. Traffic Circulation

Community-scaled traffic circulation, including multimodal provisions, should be considered during street layout and design of residential subdivisions and commercial development. Early consideration can minimize future speeding problems, decrease potential conflicts between pedestrians and vehicles, and improve the livability of the neighborhood and accessibility of commercial sites.

Engineered solutions (e.g. traffic calming) to reduce vehicle speed, the volume of cut-through traffic, and to integrate pedestrian and bicycle travel is appropriate in some cases. Traffic calming can be achieved through design features such as striping, landscaping, roundabouts, and sometimes, physical barriers. Speed humps or speed tables may be appropriate in some cases; however, designing to avoid these types of physical barriers is preferred. See Detail CC210.

Subdivision streets should be designed to encourage 85th percentile speeds to be the same as the design speed. Intersection return radii may be reduced to 15 ft for local to local road connections. Road tangents (straight segments) ideally should not exceed 500 ft in length. Long tangent sections can be segmented by T intersections or conditions that require reduced speeds such as horizontal curves or knuckles. Tangent sections greater than 1,000 ft should include engineered features to encourage drivers to travel at, or below, design speeds.

B. Clear Zone

The clear zone is the lateral distance from the edge of the traveled way that is available for the safe use of errant vehicles. A recovery area or clear zone is the area outward from each outer travel lane that should be free of obstruction and non-traversable side-slopes. The clear zone width shall be per the AASHTO Roadside Design Guide.

Where obstructions exist behind vertical curbs or curb and gutter sections, a minimum horizontal clearance of 1.5 ft shall be provided beyond the face of curb to the obstruction. All roadways shall maintain a minimum vertical clearance of 16 ft over the entire roadway. Rigid obstacles and certain other features with less than the minimum clear distance shall be adjusted so that:

- Obstacles which may be removed should be eliminated
- Obstacles which may not be removed entirely should be relocated laterally or to a more protected location
- Obstacles which may not be moved should be reduced in impact severity; Breakaway devices and flattened side slopes for improved vehicle recovery offer such an improvement.
- Obstacles which may not be otherwise treated should be shielded by crash-worthy or guardrail devices

Obstacles and features which need to be analyzed include, but are not limited to, such items as:

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- Rough rock cuts
- Rocks over 4 in. in diameter
- Streams or permanent bodies of water more than 2 ft deep
- Shoulder drop-offs with slopes steeper than 3:1 and heights greater than 2 ft
- Signs, traffic signals, and luminary supports with a concrete base extending 6 in. or more above ground
- Bridge piers and abutments
- Retaining walls and culverts
- Trees with an expected mature size greater than 4 in. in diameter, measured 12 in. above ground
- Wood poles or posts with a cross sectional area greater than 16 square in.
- Culverts, culvert ends, exposed pipes, cattle guards, and headwalls. Drainage structures should extend beyond the clear zone limits.
- Embankments
- Fire hydrants
- Non-standard mailboxes

C. Roadway Lighting

Continuous roadway lighting is typically not installed. However, at the beginning of each project, Cochise County will identify the intersections and roadway sections, if any, for which lighting is required.

Road lighting design shall meet or exceed average illuminance per the AASHTO Roadway Lighting Design Guide; pole locations per the AASHTO Roadside Design Guide and light distribution per the applicable Cochise County regulations.

Equipment and material standards shall be per ADOT Standards.

D. Traffic Signals

Traffic signals shall be installed at any location shown to be warranted by a traffic study.

For new or upgraded signal installations, the number of signal indications and faces and their location shall conform to requirements in Part IV of the MUTCD. All signal lenses shall be 12 in. in diameter. Equipment and installation procedures shall conform to ADOT Standards.

E. Cattle Guards

Cattle guards, with or without gates, may be required to prevent livestock from interfering with roadway traffic or to maintain range control. To prevent livestock from entering the Right-of-Way, the construction of cattle guards may be required at side roads or private entrances. The number of units required should be determined by the width of the roadway in which they are installed. See Details CC261-1 thru CC261-5.

6. ROADWAY DESIGN CRITERIA

This section provides additional specifications and requirements related to design criteria for designing roadways and other related improvements in Cochise County.

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A. Survey and Road Monuments

Permanent survey monuments shall be installed to designate road centerline at all horizontal angle points, at points of curvature, at points of tangency for horizontal curves, and at the centerlines of all road intersections.

After all improvements have been installed, the developer shall be responsible for having a registered land surveyor set and stamp the monuments and certify as to their accuracy prior to final inspection. See Details CC121-1 and CC121-2.

B. Design Controls

Two primary roadway design controls are design speed and the design vehicle. Design speed is the selected speed used to determine the various geometric features of the roadway. The design vehicle is the largest vehicle likely to use the road with considerable frequency.

For all roads with an anticipated posted speed of 30 mph or less, the design speed shall be 5 mph over the posted speed limit. For all roads with an anticipated posted speed of 35 mph or greater, the design speed shall be 10 mph over the posted speed limit. Design speeds may be increased based upon the road classification or as deemed necessary by the County Engineer.

The design vehicle for local streets shall be the single-unit truck (SU), for collector streets the S-BUS-40, and on commercial/industrial roads or arterials streets the WB-40.

C. Geometric Design: Horizontal Alignment

Design of horizontal alignment must consider safety, vertical alignments, access, and intersection location(s). The two primary factors which provide the framework for horizontal alignment are design speed and stopping sight distance.

Stopping sight distance shall be provided on all roads per Tables 3-1 and 3-2 in the AASHTO Green Book. The use of compound circular curves should be avoided. In rare cases where topography or Right-of-Way constraints require the use of compound curves, the radius of the flatter curve should not exceed 1.5 times the radius of the sharper curve.

Where topographic or Right-of-Way constraints require the use of reverse simple curves, a minimum tangent separation between the curves shall be 100 ft or equal to at least 4/3 the super-elevation runoff length, whichever is greatest. When using reverse curves, special attention must be given to the roadway's drainage requirements. An angle point is acceptable for breaks in tangent horizontal alignments of less than 1 degree.

The normal two-way crown section (2 percent for AC or 3 percent for DBST) shall be used. Local roads and two-lane residential collectors with design speeds of 35 mph or less should generally not be super-elevated at curves. The minimum and maximum radius of curvature, for given design speeds, shall comply with the AASHTO Green Book.

Typical shoulder widths and slopes are shown in the County's standard typical sections for the respective roadway classifications, Details CC010-CC017. If the local terrain requires modification of the shoulder slopes, the design control (cross slopes) of the roadway and the graded earthen shoulder at the edge of pavement are preferred to be equal, but may have

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a maximum algebraic difference of 8.0 percent. Thus, for a roadway with a cross slope of 2%, the shoulder maximum grade could be up to 10% or 10:1. In super-elevated sections greater than 2%, the graded shoulder slope shall be a continuation of the pavement slope. Exceptions based on engineering judgment shall be presented for approval by the County Engineer.

The maximum super-elevation permitted is 0.04 ft/ft for urban classifications and 0.06 ft/ft for rural classification roadways. Super-elevation must be designed to show respective lengths of super-elevated section, crown runoff and crown runout. See example sheet CC022 in Section D.

Sharp horizontal curves must not begin near the top of pronounced crest vertical curves or near the low point of pronounced sag vertical curves.

Knuckles may be approved on an exception basis for urban local streets with 200 ADT or less, intersecting at angles between 60 degrees and 90 degrees.

When a proposed roadway will directly connect with an existing roadway of a different width, it is necessary to install a shifting transition taper between the two. Minimum taper lengths shall be 100 ft in urban areas and 200 ft in rural locations. Taper lengths shall be calculated using the MUTCD taper formulas, as amended and approved by ADOT.

D. Geometric Design: Vertical Alignment

Vertical curves should be designed to provide adequate sight distance, safety, comfortable driving, good drainage, and a pleasant appearance. They should be made as long as possible to provide greater stopping sight distance. Adequate stopping sight distance shall be provided along the entire length of a curve.

Grade breaks with an algebraic difference of 1.0 percent or less do not require a vertical curve. The minimum length of vertical curve shall be determined by the greater of the following two criteria:

For comfort: Input the design speed into the following equations:

$L = 3 \cdot V$ where: L = length of vertical curve (ft)
V = design speed (mph)

For stopping sight distance:

$L = K \cdot A$ where L = length of vertical curve (ft)
K = rate of vertical curvature (ft/ percent)
A = algebraic difference in grades (percent)

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Table C-1: Minimum K Factor of Vertical Curves

Design Speed (mph)	25	30	35	40	45	50	55	60	65
Kmin (Crest Curves)	12	19	29	44	61	84	114	151	193
Kmin (Sag Curves)	26	37	49	64	79	96	115	136	157

Minimum rate of vertical curvature (K) for crest and sag vertical curves for stopping sight distance.
Source: A Policy on Geometric Design of Highways and Streets, as distributed by the American Association of State Highway and Transportation Officials (AASHTO), 2011.

To ensure proper longitudinal drainage near the high point of a crest vertical curve, the rate of vertical curvature (K) should not exceed 167. If K is larger than 167, special attention is needed to ensure proper drainage to obtain a minimum grade of 0.25 percent.

There shall be a minimum grade of 0.25 percent along all roads; a maximum grade of 7 percent on arterial, major collector or section-line roads; and a maximum of 10 percent on minor collector or local roads for a distance not to exceed 600 ft.

E. Geotechnical Evaluation and Pavement Section

County roads shall have a pavement structural section based on the ADT, functional classification for the roadway, and bearing capacity of soils and/or sub-base materials under the roadway. Some roadways will be paved with AC, while others have a DBST/Chip-Seal. On rare occasions, there may be a TBST chip-sealed surface. There are also structural depth requirements for unpaved County roads for stabilized AB cross-sections, and standard AB cross-sections, as well as for re-compacted native material. Pavement and base course design shall be in accordance with "Materials Preliminary Engineering and Design Manual" by ADOT, 1992 and as amended, and as applicable. See cross-sections CC010 thru CC016 and specifications.

The pavement as designated on the typical cross-section, shown on the Section D Details, shall be considered a preliminary requirement, not approved for construction, until substantiated by acceptable test results of the actual subgrade soil. Approval by the County Engineer of the final design shall be obtained prior to approval of the construction plans.

Field sampling of the existing subgrade soil shall be required to determine the actual depth of aggregate base required. Soil samples should be taken a minimum of every 1,000 ft per lane and within 0.5 ft from finished subgrade. More frequent testing may be required depending on the existing soil or as directed by the County Engineer to accurately determine the soil profile. Imported soils/materials shall also be tested as directed by the County Engineer.

The testing and analysis of soils and materials shall be by a person who is authorized and certified under Title 32-142 of the Arizona Revised Statutes (ARS). Laboratory reports shall be submitted showing sieve analysis, plasticity index (PI), and percent minus 200 of all subgrade samples taken. Submittal of the findings of all other material and construction testing previously made on or for the required public improvements is also required. Sieve analysis shall be per ASTM D422, PI per ASTM D4318 and #200 wash per ASTM D1140.

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F. Drainage

The drainage design report for the complete development shall comply with the current adopted version of the Floodplain Regulations for Cochise County, as amended and with the Cochise County Design Standards. A Right-of-Way-permit shall be obtained from the CCH&FD before installing culverts.

Hydraulic calculation for pipe and box culverts should use the methodology of Hydraulic Design Series (HDS) No. 5, Hydraulic Design of Highway Culverts, or other generally accepted programs or publications. Culvert outlets and overflow sections should also be designed in accordance with HEC-14, Hydraulic Design of Energy Dissipater for Culverts & Channels, or other applicable methodology approved by Cochise County. The potential for sedimentation within the culvert or overflow dip sections and/or at the inlet or outlet shall be considered. At a minimum, a self-cleaning velocity of 3 ft per second (fps) should be provided for all culverts and dip crossings.

When flows cross the roadway alignment the drainage structures shall be designed to pass a design storm under the roadway based on the road classification as follows:

Table C-2: Design Storm

Road Class	Qstorm under road (Design Storm)
Arterial & Major Collector	25-year
Minor Collector	10-year
Local	5-year

Drainage crossings and channels shall be designed to convey the above storm events under the roadway with the provision that the 100-year storm be conveyed through an overflow/dip section without adversely impacting adjacent properties as defined by the Floodplain Regulations. Increases of flood heights and flow velocities over existing conditions are not desired but may be allowed if demonstrated that the level of increase does not adversely affect adjacent properties. The road surface shall be stabilized with AC, DBST, or Portland Cement Concrete (PCC) depending on velocity.
For at-grade crossings, a minimum 6-in. x 18-in. cutoff wall shall be provided outside the edges of the roadway pavement to prevent erosion and to maintain a stable roadbed under overflow conditions. Actual depth of wall shall be verified by scour calculations. Cut-off walls shall be placed at least 4 ft from the upstream and downstream edge of pavement lines. The pavement shall be widened to the upstream and downstream cut-off walls. Cut-off walls shall extend to the developed 100-year flow width. Drainage crossings and channels shall be designed to convey Q100 within the Right-of-Way. Diversion of flow from one basin to another is prohibited. For additional guidance reference MAG Detail 552.

At intersecting local roads for design storm flows less than 10 cubic ft per second (cfs), a 6-ft concrete valley gutter may be used per MAG Detail 240. Drainage crossings at intersections shall line up with gutters and/or roadside ditches entering and exiting the intersection.

Drainage channels, other than adjacent roadside ditches, shall be laid out in such a manner so that changes in flow direction do not exceed 45 degrees.

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Inverted crowns, or similar road designs, should only be used in extraordinary circumstances.

Channel flow velocities for the design storm shall not exceed that generally accepted as "non-erodible" for the type of soil and/or channel lining in drainage channels and overflow dip sections. Channel bank protection shall be provided for velocities of 4 fps or greater. Bank stabilization shall comply with ADWR State Standard 7–98 "Watercourse Bank Stabilization."

Banks, slopes of channels, and roadbeds are to be protected or stabilized at all locations where changes in direction of channel flows could result in erosion or scour.

The minimum culvert diameter for roadway crossings shall be 24 in. and 18 in. for driveways. All culverts shall have flared-end sections or headwalls installed. Culverts 48 in. and greater shall have concrete headwalls.

A driveway accessing on minor collector and higher classified roads shall have the finished grade lower than the edge of pavement of the adjacent travel lane. This is to prevent any driveway overflow drainage from impacting the through travel lane. Driveway culvert maintenance is the responsibility of the home or business owner. Failure to maintain a driveway culvert that results in diverting water onto the travel way portion of a County road may result in removal of the culvert at the owner's expense and revocation of the permit.

The minimum inside height of box culverts shall be 4 ft above the natural streambed elevation. The minimum height of an arch culvert shall be 4.5 ft. In desert wash areas, the preferred minimum height of box culverts is 5 ft and their inverts shall typically be set 6 in. below the existing streambed flow. Handrails shall be installed for headwalls located in areas where pedestrians may be present.

Culvert profile drawings, showing appropriate hydraulic data, shall be included within the construction plans. A note shall be included that defines the design storm frequency, flow, and velocity for all drainage structures.

All drainage structures should extend beyond the clear zone limits for the roadway. If this is not feasible, they shall be suitably protected with traffic barriers.

All culverts shall be placed in the natural flow line of the channel. A detail showing the layout of proposed culvert(s) will be required. The detail will include, but shall not be limited to, invert elevations, top-of-road elevations, headwalls, inflow and outflow channel geometry, erosion protection, other utilities, fill cover etc.

Minimum cover of fill over culverts must be provided to maintain the structural integrity of the pipe under anticipated loading conditions. Culvert manufacturers provide minimum cover and spacing requirements for prefabricated pipe.

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G. Landscaping

Landscaping within the Right-of-Way may be permitted, in compliance with the Roadside Design Guide, provided the landscaping does not impede recommended sight distance or cause visibility problems, does not introduce safety hazards, and does not create the potential to damage the road and drainage system infrastructure. If installed within any part of a roadside drainage channel or on side-slopes, all materials used shall not impede the drainage flow or decrease the cross-sectional area of the channel. See Detail CC205-4.

Plantings which bear fruit, nuts, or seeds that, when dropped, will interfere with or impede storm water drainage flow shall not be permitted.

Irrigation systems may be permitted to be installed within the Right-of-Way provided that installation includes features to keep water from ponding or becoming trapped near or under the roadway. Plans and specific details outlining the proposed landscaping, irrigation system, and/or underdrains that are to be installed shall be approved by the CCH&FD. A Maintenance Agreement shall be entered into with the CCH&FD stipulating the developer's irrigation maintenance schedule and responsibility before work takes place in the public Right-of-Way.

The review and approval of landscaping plans that are part of an overall landscape plan for a development shall be coordinated with the Planning Department.

H. Raised Median Curb, Gutter, and Sidewalk

Raised medians may be placed at subdivision entrances or can be used to create a divided roadway. All medians greater than 6 ft in width shall have a natural native drought tolerant landscape in accordance with the applicable Cochise County regulations and a maintenance agreement from a homeowners' association (HOA) or other group. Any median less than 6 ft shall be constructed of concrete or as otherwise approved by the County Engineer.

Curb, gutter, and sidewalk may be required to be installed in growth areas A and B and/or adjacent to incorporated cities or towns or as required by the County Engineer. Sidewalks and sidewalk ramps shall conform to the requirements of the Americans with Disabilities Act (ADA) of 2010, and current updates. Pedestrian curb ramps shall be designed per MAG Detail 235-1 thru 235-5.

Development occurring adjacent to public lands or recreational areas may be required to provide shared use paths, recreational trails, or recreational trailheads with or without parking. See Details CC232, CC233-1 and CC233-2.

I. Guardrail

Guardrail shall be provided where necessary for the safety of the traveling public, as well as protection for adjacent properties. The need for guardrail should be determined at the early stages of design to ensure that road sections are designed with enough width to facilitate the guardrail installation and that drainage pipes have sufficient cover for the installation of posts and are extended to accommodate the necessary adjustments in the embankments and slopes.

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The face of the guardrail shall be a minimum 3.5 ft in front of the obstacle. In fill sections, the back of the guardrail post shall be 2 ft in front of the hinge point of the slope to ensure adequate lateral soil resistance for the posts during impact.

If a curb is used with a guardrail, the face of the curb should be no closer to the traveled way than the face of the guardrail.

The following minimum guidelines for guardrail installation are based on AASHTO Roadside Design Guide. However, it should be noted that guardrail may be required in some locations that do not necessarily meet these criteria based on the judgment of the County Engineer. Such factors as traffic volumes, speed of traffic, accident history, road curvature, slopes of recovery area, presence of curb and gutter, and location of trees, utility poles, etc. must all be considered when determining if guardrail is warranted in a specific location.

Guardrail is typically required on sections of roadway when any of the following conditions exist within the clear zone, as defined in 6B:

- A roadside parallel embankment (fill slope) of 3:1 or steeper and a depth of 4 ft or more
- A water hazard with a depth of 2 ft or more
- A ditch section with a depth of 3 ft or more
- A fixed object (such as a culvert, pipe, headwall, retaining wall, bridge pier, or abutment)
- Other hazards as determined by the County Engineer

The County Engineer shall make the final determination as to whether guardrail is warranted along a section of roadway based on a review of the plans, a field inspection after rough grading has been completed, and/or prior to final acceptance.

See the AASHTO Roadside Design Guide for direction on all types of approved barriers, required lengths, and end treatments. New roadside barriers shall meet the crash test requirements established by National Cooperative Highway Research Program (NCHRP) Report 350 and approved for use by FHWA and ADOT.

J. Pavement Markings and Signs

All required pavement markings, traffic control devices, and road name signs for new and/or existing roads shall be shown on the improvement plans and installed or paid for by the developer.

Refer to Signing and Marking Specifications in Section E and the following documents (current versions):

- Arizona Department of Transportation (ADOT) Traffic Control Design Guidelines
- Arizona MOAS as distributed by ADOT
- Arizona Supplement to MUTCD for Streets and Highways 2009 Edition, ADOT
- MUTCD for Streets and Highways, as distributed by the USDOT, FHWA; and as amended and approved by ADOT

Signs indicating that a stub roadway will be extended in the future shall be installed at the end of stub roads as a part of the subdivision development. The sign shall have a message that

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indicates the following: "This Road is to be extended with Future Development. For More Information Contact the Cochise County Planning Department." This sign is to be provided by the developer and fabricated using a 0.080-in. gauge aluminum sign blank and fully reflective (minimum engineering grade material) sheeting and designed per MUTCD.

7. PUBLIC INFRASTRUTURE IMPROVEMENT PLANS

The developer shall be responsible for having a registered engineer, being licensed in the State of Arizona, and preparing a complete set of improvement plans to include typical sections, roadway plan and profiles, signing and striping plans, drainage details, roadway cross sections, Engineer's Estimate of Construction Cost, and special provisions for all public infrastructure improvements.

No construction shall commence until improvement plans are reviewed and approved by CCH&FD and a Right-of-Way permit, with an approved Traffic Control Plan, is obtained. Such review and approval is intended to ensure general compliance with the Cochise County Design Standards. This review is not intended to ensure completeness and/or accuracy of all plan details or assume any design responsibility from the Design Engineer. At the time of submittal of plans, plan check fees shall be paid based on current adopted fee schedules.

The following provides required plan formatting so that significant design elements are clearly shown in a consistent manner and plan reviews are facilitated. See Detail CC220 for illustrative example.

Plans shall be drawn on a 24-in. x 36-in. sheet at no smaller than a horizontal scale of 1 in. = 40 ft and a vertical scale of 1 in. = 4 ft. A larger horizontal scale may be required (such as 1 in. = 10 ft or 5 ft) where necessary to clearly show details. An index sheet to a set of detailed plans in excess of five sheets should be presented. Symbols to be used should conform to ADOT Drafting Guidelines or other widely accepted and clearly defined set of standards symbols.

The sheet(s) shall be oriented in such a way that north is to the top or to the right with roadway stationing increasing from left to right. Stationing shall be south to north and west to east for roadway improvements, and in the "looking down station" orientation for drainage improvements. The initial stationing shall be large enough to preclude the possibility of negative station should the project limits be expanded. Provide match lines (call-outs) for plans and details that, due to size or scale, must be broken between sheets or different locations on a single sheet. Provide details, text, and other drawing components at a sufficient size and clarity to be legible when reduced to half size. Minimum lettering height shall be 0.10 in. Stick-on materials, other than standard blue-Stake stickers, shall not be allowed on plan originals.

All existing culture (site features, typography, utilities) shall be shown with a minimum of 1-ft contour lines. For projects without drainage concerns, the use of 2-ft contour lines may be approved by the County Engineer, if sufficient detail for the project is still achieved. Horizontal limits shall extend a minimum of 25 ft beyond the Right-of-Way, left and right, with elevations given at average natural ground. All ditch flow lines, tops of banks, tops of linings, culverts, inverts, tops of headwalls, building slab elevations, and similar features shall be obtained and clearly noted. Existing culverts, washes, and ditches shall be profiled along their existing

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alignments with skew angles and angle points identified. The width of ditches, berms, and similar structures shall be identified.

Major drainage features shall require additional cross sections, both upstream and downstream, a minimum 300 ft beyond the project limits. Existing edge of pavements, major driveways, traffic signals, traffic striping, and traffic signs shall be surveyed a minimum of 300 ft beyond the end of the project. Existing grades shall be shown on 50 ft intervals and new grades on 100 ft intervals.

At a minimum, curve, *vertical and horizontal* geometric data and drainage features shall be shown on design plans. Vertical control shall, as a minimum, consist of a single-line profile and add super-elevation profile for each direction of travel. Drainage features shall list design flow and velocity. Label street names, lateral dimensions of streets, and Rights-of-Way, curb return data, drainage structures, etc. Indicate finished elevations, including Point of Vertical Curve (PVC), Point of Intersection, and Point of Vertical Tangency (PVT) of vertical curves; intersection points; and all other points needed for good vertical control for construction. Include any additional information needed to clarify profiles or deal with special conditions.

A typical section is needed for each condition encountered and should be clearly identified as to where it is applicable. Typical sections shall show both existing grade and proposed grades for the structural section and the proposed road template. Typical sections shall show materials, thickness, compaction, and application for selected materials; prime coat; AC; DBST; AB; curb and gutter; sidewalk; and drainage structures, as applicable.

Plan and profile sheets shall show the locations of street pavements including all features and structures for proper drainage. Provide adequate detail of all structures. Original ground and design grade shall be plainly labeled. Other plans shall show the location, size, type, construction, and material of the improvements. Plans should also contain a blue stake alert and reference any utility/improvement plans. If applicable, water and sewer plans shall be submitted for reference. Water and sewer plans shall be submitted to and approved by the Arizona Department of Environmental Quality (ADEQ) and copies of the applications/approvals sent to CCH&FD.

Location, size, elevation, and other appropriate description of any existing facilities or utilities shall be shown on the drawings. Where crossing of underground utilities occur, vertical separations need to be shown. If any utility company imposes special conditions or precautions concerning their utility, notation of those instructions shall be included on the plans. Accurate elevation and alignment of all utilities shall be shown on the plans. Potholing shall be utilized in determining utility elevations and alignment if necessary.

Construction note(s) and details shall be provided to ensure clarity and prevent confusion or misunderstanding during construction. Notes shall be clearly worded and symbols consistent throughout the plan sheets(s). Intersection staking diagrams, culverts, and other items appearing on more than one sheet shall be cross-referenced. Standard Drawings and Details shall be referred to by number and included as part of the plan set.

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Section corners, quarter corners, sixteenth corners, and other monuments that define existing alignments and Rights-of-Way and/or lie within the project limits shall be incorporated into the horizontal control network. Construction control lines shall be located by distance and angle measurements from section monumentation. All section monuments necessary to describe the adjacent Right-of-Way shall be located and shown on project plans. Any monuments disturbed during the construction phase must be relocated per A.R.S. §33-103 standards and a Corner Record filed with the Cochise County Recorder's Office as stipulated by A.R.S. §33-106. Such monuments shall conform to Detail CC121-1 or CC121-2.

North American Vertical Datum of 1988 (NVAD 88 –National Geodetic Survey) shall be used unless otherwise authorized by Cochise County. The horizontal and vertical datum shall be tied to one Cochise County geodetic monument.

Survey monument installation shall be indicated on the plans at street intersections, Points of Curvature (PC)s, Points of Intersection (PI)s, Points of Tangency (PT)s, etc.

The design engineer shall prepare Special Provisions for construction items not contained in or adequately covered by the MAG Uniform Standard Specifications and Cochise County Supplement to the MAG Specifications. Special provisions shall ensure each construction item is clearly defined and all material and construction requirements are identified. Special Provisions shall be written and arranged in the same format as the MAG Specifications. The design engineer shall prepare and submit sealed Special Provisions to be included with the construction documents submitted for review.

The design engineer shall provide Cochise County with a sealed and signed Engineer's Estimate of Construction Cost. The estimate shall contain a comprehensive itemized listing of individual components with quantities, estimated unit costs, and extended total cost identified for each item.

For roadway projects, cross sections shall be provided showing the roadway section, existing ground, underground utilities, and new and existing drainage structures. Cross sections shall be at 50-ft intervals, and at critical changes in the typical section (such as the beginning and end of roadway tapers, walls, medians or additional lanes). Earthwork requirements shall be provided and calculated based on end-area method from these cross sections and the quantities included at the front of the plan set or coversheet.

Title, name of firm, address, stamp, registration seal, signatures of the engineer, and date, including revisions dates, shall be shown on the drawings. A vicinity map, project title, developer, and engineering firm names and addresses shall be shown on the cover sheet.

Once the improvement plans are approved, the original reproducible plans shall be submitted to CCH&FD to date and stamp: Reviewed for Compliance with Cochise County Standards. The developer shall then submit 5 complete full size sets and one half-size set of the construction plans to CCH&FD, along with an electronic version PDF of the final stamped plans.

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8. CONSTRUCTION AND INSPECTION

All construction within the existing or proposed County Right-of-Way shall be completed under the general inspection and approval of the CCH&FD. No construction shall be commenced until a Right-of-Way permit has been issued by the CCH&FD. Unless otherwise specified on the approved construction plans or Right-of-Way permit, all materials, testing, construction methods, installations, specifications, and standards shall conform to these Design Standards.

Existing roads that are, or will be, incorporated into a subdivision circulation system and serve existing development shall be maintained to the current level of service during construction of the new subdivision roads or as approved by the County Engineer per an approved Traffic Control Plan. Existing street and traffic signs shall be maintained during construction and relocated by the developer/contractor as directed by the County Inspector.

Primary responsibility for control of the construction and quality of the improvements in subdivisions remains with the developer. Quality control of public improvements, for subdivisions and other developments, shall be made by the developer's design engineer, as agent for the developer. The design engineer is responsible for monitoring construction activities, documenting all field changes, and summarizing all testing results and inspections. It should not be expected that inspection by the CCH&FD will in any way eliminate need for regular inspection during the entire construction period by the Design Engineer.

The Design Engineer is responsible for the correctness and completeness of the plans and associated documents. The property owner and/or developer is responsible for the construction and implementation of the project. The County will not bear any responsibility for the cost of corrections to the plans or extra work resulting from changes which may be required during construction due to errors and/or omissions on the plans. Any difficulties encountered during construction will be resolved by the Developer and Design Engineer, at their sole expense.

Adequate construction inspections assure compliance to Cochise County Design Standards and are the basis for the County Engineer's acceptance of public improvements for County maintenance. Plans and specifications describe in detail the work that is to be constructed including the materials to be used, the workmanship required, and certain construction procedures to be followed. Inspections by CCH&FD are to verify general conformance with the approved construction plans and specifications. The County Inspector, under the direction of the County Engineer, is authorized to inspect all work performed in connection with public improvements. Although inspectors are not required to inspect an item until it is complete they will periodically observe work in progress and assist the contractor in avoiding rework and stoppages.

Geometric control, survey, construction layout, construction procedures, and installation of all improvements in conformance with the approved construction plans and specifications is the responsibility of the Developer and Design Engineer. It is the responsibility of the developer's Design Engineer to conduct the necessary inspections required to certify to the County that construction has proceeded according to his/her design and the approved plans.

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All improvements shall be constructed in accordance with the approved construction plans and specifications. Any field revisions shall be issued by the Design Engineer, in writing, and approved, in writing, by the County Engineer. The revision shall be sent to the field by the Design Engineer as a plan revision. No work of any kind shall be allowed without approved construction plans and specifications.

The developer shall be responsible for having a person who is authorized and certified under ARS §32-142 to perform and conduct all materials testing used in the design and construction of the improvements. The results of all tests shall be provided to the Design Engineer and County Inspector prior to applicable items being inspected. The developer is responsible for the cost of all sampling and testing necessary to substantiate the design or acceptability of construction quality of the improvements. The County Inspector shall be on site during testing and has the authority to select locations for tests to be made and to require additional tests of suspect areas or at apparent visible changes in soil types.

The pavement design determination process assumes that the properly compacted subgrade soil will produce a stable platform for pavement construction. If an unsuitable subgrade (wet, soft, unstable, or unsuitable material) is encountered, it must be removed down to a firm foundation and replaced with adequately compacted material of suitable quality. Prior to the placement of the sub-base/base layer, the subgrade must be inspected by the CCH&FD for grade, compaction, and wheel load tested. A wheel load test is to be performed with a full water truck. Additional inspections and wheel load tests shall be required on each subsequent base or pavement course. The base course shall be inspected for smoothness and wheel load tested before placement of pavement or DBST. Subgrade and base course shall be density tested a minimum of every 500 ft, per lane. The County Inspector shall be on site to observe pavement construction procedures in compliance with Section E.

All storm drainage facilities installed must be inspected and approved. No backfilling is permitted on any pipe installation until it has been inspected. A flow test shall be done prior to final backfill. All storm pipes shall be flushed and thoroughly cleaned prior to the final inspection.

The minimum inspections by the County Inspector will be performed, but not limited to, the following stages:

- Subgrade Completion – all utilities, culverts, ditches, shaping to finished subgrade, etc. complete in place
- AB complete in place
- Pavement course, AC, DBST or PCC, complete in place
- Final

Pavement course shall not be placed before base course has been approved and base course shall not be placed until subgrade has been approved by the County Inspector. No paving construction shall be started until all utility lines under the proposed paved area are completed.

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It shall be the responsibility of the contractor and/or developer to notify the County Inspector a minimum of two working days in advance of required inspection. Cochise County will conduct the formal inspection on a total-stage completion basis and not on a partial-stage completion basis.

The Design Engineer shall document, verify, and report all pertinent information relative to quality control for all improvements being installed. All laboratory reports deemed necessary for quality control and testing, along with compaction test results, shall be submitted to the County Inspector by the inspecting firm as backup data to the Design Engineer's report. The responsibility for the construction of all projects shall lie with the developer. The cost for all required quality control shall be the sole responsibility of the developer. Any questions as to construction standards, interpretation of results, or methods of construction, shall be brought to the County Engineer's attention and interpretation.

The developer shall certify that all bills for labor and materials incorporated in the work have been paid and agree to indemnify and hold harmless the County against any and all liens, claims of liens, suits, actions, damages, charges, and expenses whatsoever, which the County may suffer arising out of the failure of the developer to pay for all labor performed and materials furnished in the construction of the required improvements.

The developer shall submit itemized construction costs of all dedicated public improvements.

The final inspection shall be scheduled at least five working days in advance. It is the responsibility of the developer to have all necessary persons in attendance at the final inspection, including the Design Engineer and Contractor. When the final inspection is complete, a written punch list will be sent to the developer, Design Engineer, and the Contractor. Once all punch list items are complete, CCH&FD will prepare the required documentation to accept the public improvements.

9. POST CONSTRUCTION DOCUMENTATION

After completion of the construction of any public roadway or related improvements it is the responsibility of the developer and/or contractor with the Design Engineer to prepare and provide all post-construction documents for the County records and reference. These include, but may not be limited to, Record Drawings, Survey Monument certifications and any work completed under warranty.

A. Record Drawings (As-Builts)

The developer shall have the Design Engineer submit final, stamped as-built plans, in one full-sized hard copy, one half-sized hard copy and one electronic PDF version, showing all streets, drainage structures, and other improvements as constructed/changed and copies of final as-built utility plans showing all utilities constructed within the public Right-of-Way. Upon request of the County Engineer, one electronic copy of the Record Drawings will be provided in an editable AutoCAD file.

The Design Engineer shall submit a final report summarizing all field changes, test results, and inspections and a statement that the public improvements have been constructed in

conformance with his/her design and the approved lines, grades, specifications, and standards.

All documentation shall be submitted before a request for release of lots will be considered.

B. Survey Documentation

After all improvements have been installed, the developer shall be responsible for having a registered land surveyor set and stamp the monuments and certify as to their accuracy prior to final inspection. See Section D, Details CC121-1 and CC121-2.

C. Warranty Period

The two-year warranty period shall commence once the documentation to accept the constructed public improvements is signed by the County Engineer. The developer is responsible to maintain all Arizona Pollutant Discharge Elimination System (AZPDES) requirements during the two-year warranty period.

DRAFT

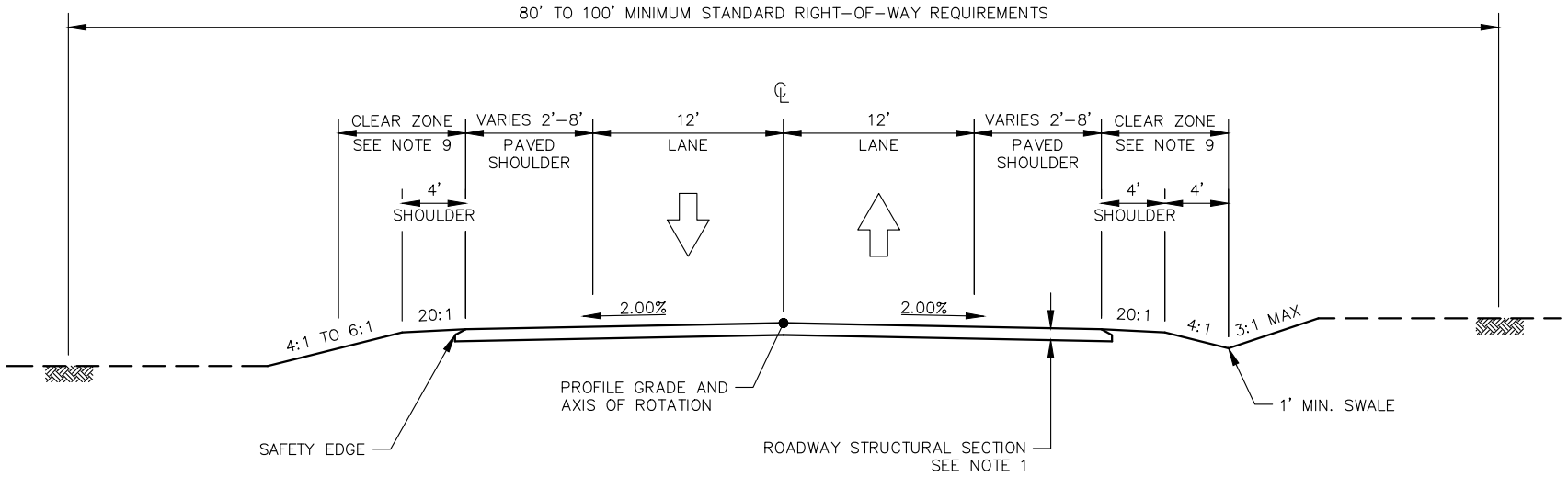
STANDARD
TYPICAL SECTIONS
for
CONSTRUCTION
within

COCHISE COUNTY

Draft FINAL August 2017

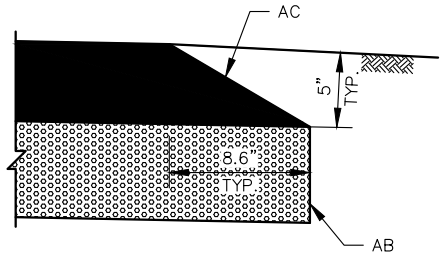
HIGHWAY AND FLOODPLAIN DEPARTMENT

STANDARD

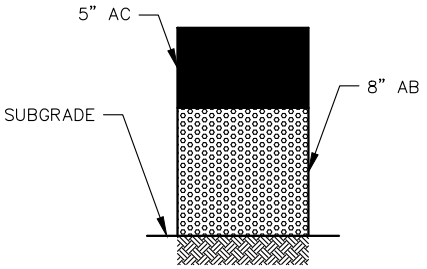


NOTES:

1. 5" MINIMUM ASPHALTIC CONCRETE (AC) OVER 8" MINIMUM AGGREGATE BASE (AB) OVER 6" COMPACTED NATIVE MATERIAL. ACTUAL ROADWAY STRUCTURAL SECTION TO BE DETERMINED BY GEOTECHNICAL EVALUATION, CONSISTENT WITH DETAIL CC208-1 OR SN ≥ 1.92.
2. SAFETY EDGE SLOPED AT 30° ± 5°, PLACED AT FULL DEPTH AC PAVEMENT LIFTS. SEE DETAIL THIS SHEET AND MAG SECT. 326. REQUIRED UNLESS OTHERWISE DIRECTED BY THE COUNTY ENGINEER.
3. AGGREGATE BASE SHALL BE COMPACTED TO 100% OF MAXIMUM DRY DENSITY.
4. SUBGRADE PREPARATION SHALL BE A MINIMUM 6" DEPTH OF SCARIFICATION AND RE-COMPACTION OF NATIVE MATERIAL TO A MINIMUM OF 95% OF MAXIMUM DRY DENSITY.
5. ROADWAY EMBANKMENT SHALL BE COMPACTED TO A MINIMUM OF 90% OF MAXIMUM DRY DENSITY.
6. DRAINAGE DITCH AS REQUIRED.
7. MINIMUM R/W REQUIREMENTS 80'TO 100', TOTAL WIDTH DETERMINED BY DRAINAGE/TOPOGRAPHY.
8. TYPICAL DESIGN ADT FOR THIS CLASSIFICATION OF ROAD IS TYPICALLY OVER 250 VEHICLES PER DAY; INTENSIVE INDUSTRIAL LAND USES WITH HIGHER VOLUMES OF TRUCK TRAFFIC.
9. FOR CLEAR ZONE REQUIREMENTS, REFER TO THE LATEST EDITION OF THE AASHTO ROADSIDE DESIGN GUIDE (CHAPTER 3).
10. LANE WIDTH AND MINIMUM DRIVEWAY RADII TO BE DETERMINED BY TRAFFIC ENGINEER IN STAMPED TRAFFIC REPORT AND APPROVED BY COUNTY ENGINEER.



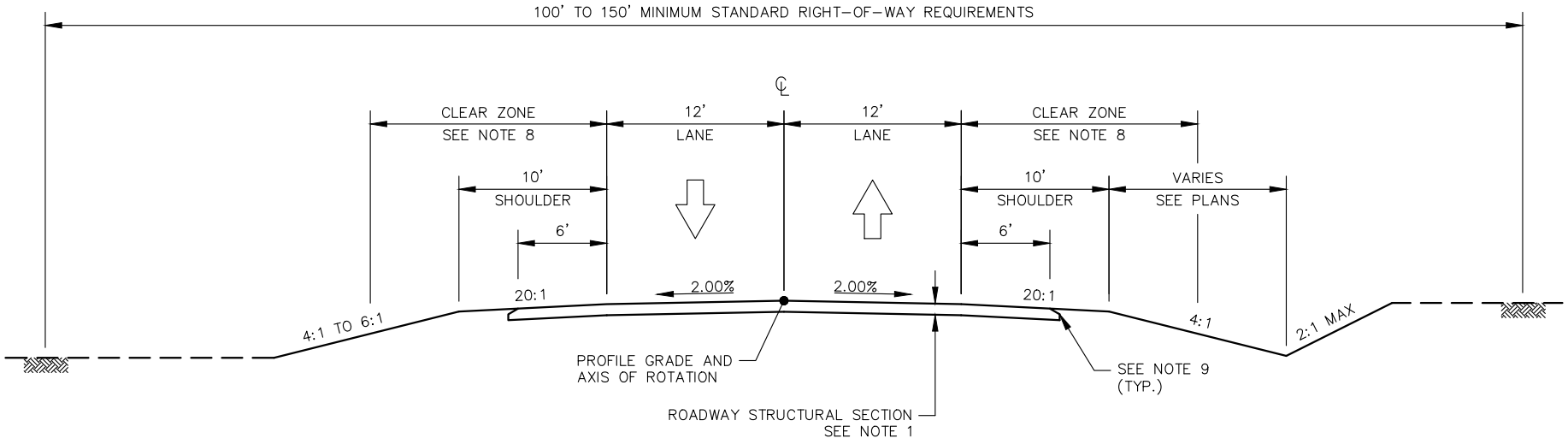
SAFETY EDGE DETAIL

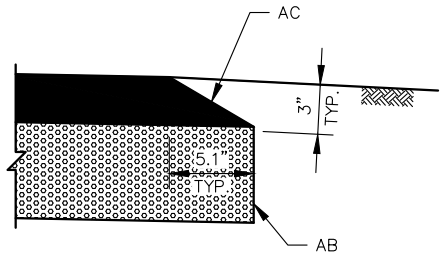


ROADWAY STRUCTURAL SECTION

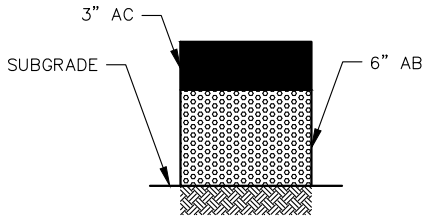
TOTAL THICKNESS = 13"

COCHISE COUNTY	HIGHWAY & FLOODPLAIN TYPICAL SECTION	COMMERCIAL / INDUSTRIAL ROAD	DRAFT 08-22-2017	DETAIL NO. CC010





SAFETY EDGE DETAIL



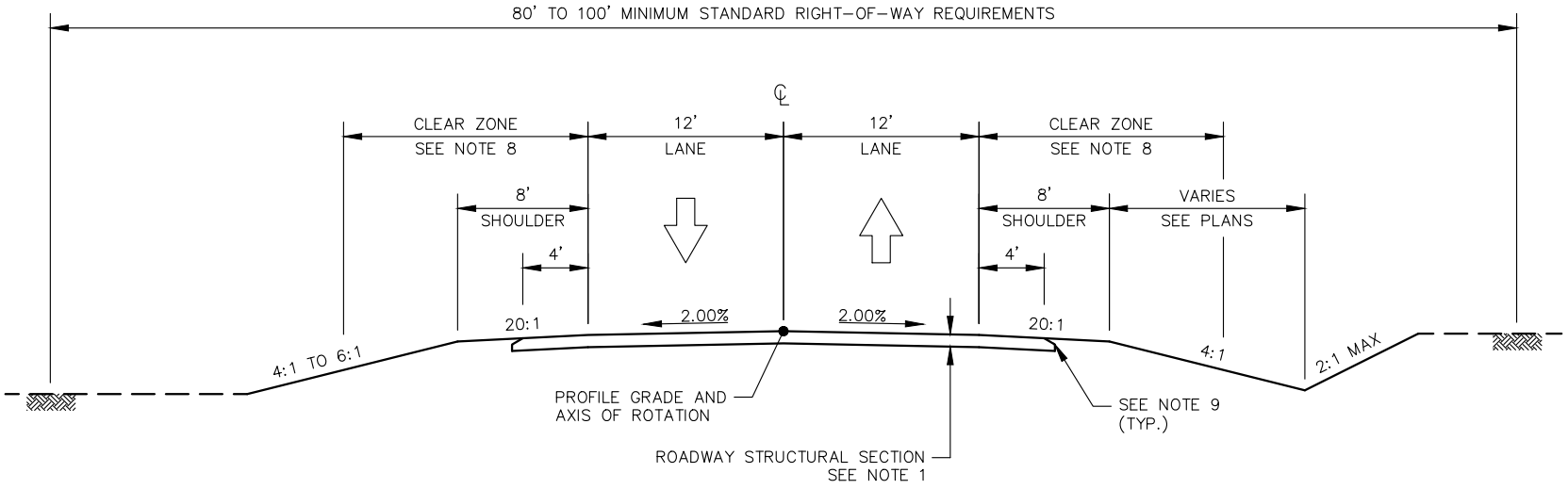
ROADWAY STRUCTURAL SECTION

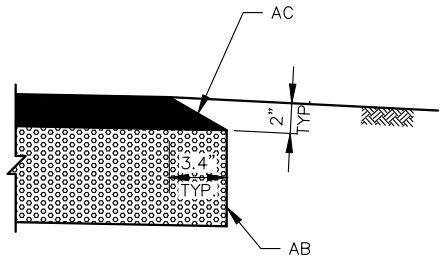
TOTAL THICKNESS = 9"

NOTES:

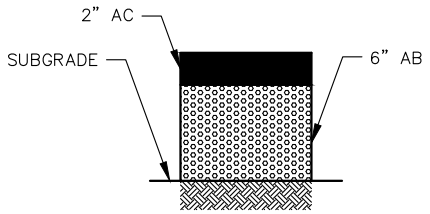
1. 3" MINIMUM ASPHALTIC CONCRETE (AC) OVER 6" MINIMUM AGGREGATE BASE (AB) OVER 6" COMPACTED NATIVE MATERIAL (SUBGRADE). ACTUAL ROADWAY STRUCTURAL SECTION TO BE DETERMINED BY GEOTECHNICAL EVALUATION, CONSISTENT WITH DETAIL CC208-1 OR SN ≥ 2.36.
2. AGGREGATE BASE SHALL BE COMPACTED TO 100% OF MAXIMUM DRY DENSITY.
3. SUBGRADE PREPARATION SHALL BE A MINIMUM 6" DEPTH OF SCARIFICATION AND RE-COMPACTION OF NATIVE MATERIAL TO A MINIMUM OF 95% OF MAXIMUM DRY DENSITY.
4. ROADWAY EMBANKMENT SHALL BE COMPACTED TO A MINIMUM OF 90% OF MAXIMUM DRY DENSITY.
5. DRAINAGE DITCH AS REQUIRED.
6. MINIMUM R/W REQUIREMENTS 100'TO 150', TOTAL WIDTH DETERMINED BY DRAINAGE/TOPOGRAPHY.
7. TYPICAL DESIGN ADT FOR THIS CLASSIFICATION OF ROADWAY IS OVER 2,600 VEHICLES PER DAY OR HAS BEEN DESIGNATED AS A MAJOR COLLECTOR IN THE FEDERAL FUNCTIONAL CLASSIFICATION SYSTEM.
8. FOR CLEAR ZONE REQUIREMENTS, REFER TO THE LATEST EDITION OF THE AASHTO ROADSIDE DESIGN GUIDE (CHAPTER 3).
9. SAFETY EDGE SLOPED AT 30° ± 5°, PLACED AT FULL DEPTH AC PAVEMENT LIFTS OR TOP 5", WHICHEVER IS LESS. SEE DETAIL THIS SHEET AND MAG SECT. 326. REQUIRED UNLESS OTHERWISE DIRECTED BY THE COUNTY ENGINEER.
10. IDENTIFYING BICYCLE LANES WITH APPROPRIATE STRIPING AND SIGNING SHOULD BE CONSIDERED, WHERE FEASIBLE.

COCHISE COUNTY	HIGHWAY & FLOODPLAIN TYPICAL SECTION	MAJOR COLLECTOR ROAD	DRAFT 08-22-2017	DETAIL NO. CC011





SAFETY EDGE DETAIL



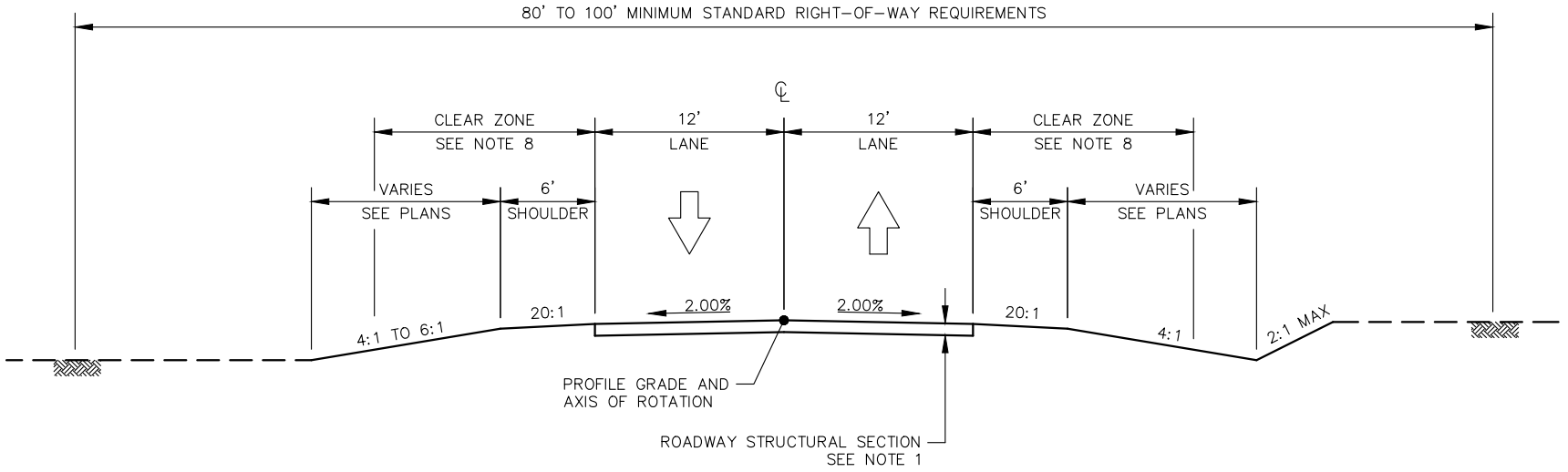
ROADWAY STRUCTURAL SECTION

TOTAL THICKNESS = 8"

NOTES:

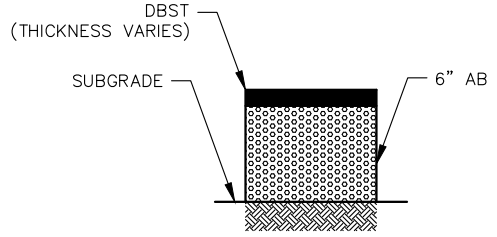
1. 2" MINIMUM ASPHALTIC CONCRETE (AC) OVER 6" MINIMUM AGGREGATE BASE (AB) OVER 6" COMPACTED NATIVE MATERIAL (SUBGRADE). ACTUAL ROADWAY STRUCTURAL SECTION TO BE DETERMINED BY GEOTECHNICAL EVALUATION, CONSISTENT WITH DETAIL CC208-1 OR SN ≥ 1.92.
2. AGGREGATE BASE SHALL BE COMPACTED TO 100% OF MAXIMUM DRY DENSITY.
3. SUBGRADE PREPARATION SHALL BE A MINIMUM 6" DEPTH OF SCARIFICATION AND RE-COMPACTION OF NATIVE MATERIAL TO A MINIMUM OF 95% OF MAXIMUM DRY DENSITY.
4. ROADWAY EMBANKMENT SHALL BE COMPACTED TO A MINIMUM OF 90% OF MAXIMUM DRY DENSITY.
5. DRAINAGE DITCH AS REQUIRED.
6. MINIMUM R/W REQUIREMENTS 80'TO 100', TOTAL WIDTH DETERMINED BY DRAINAGE/TOPOGRAPHY.
7. TYPICAL DESIGN ADT FOR THIS CLASSIFICATION OF ROADWAY IS BETWEEN 1,110 AND 6,300 VEHICLES PER DAY OR HAS BEEN DESIGNATED AS A MINOR COLLECTOR IN THE FEDERAL FUNCTIONAL CLASSIFICATION SYSTEM.
8. FOR CLEAR ZONE REQUIREMENTS, REFER TO THE LATEST EDITION OF THE AASHTO ROADSIDE DESIGN GUIDE (CHAPTER 3).
9. SAFETY EDGE SLOPED AT 30° ± 5°, PLACED AT FULL DEPTH AC PAVEMENT LIFTS OR TOP 5", WHICHEVER IS LESS. SEE DETAIL THIS SHEET AND MAG SECT. 326. REQUIRED UNLESS OTHERWISE DIRECTED BY THE COUNTY ENGINEER.

COCHISE COUNTY	HIGHWAY & FLOODPLAIN TYPICAL SECTION	MINOR COLLECTOR ROAD	DRAFT 08-22-2017	DETAIL NO. CC012



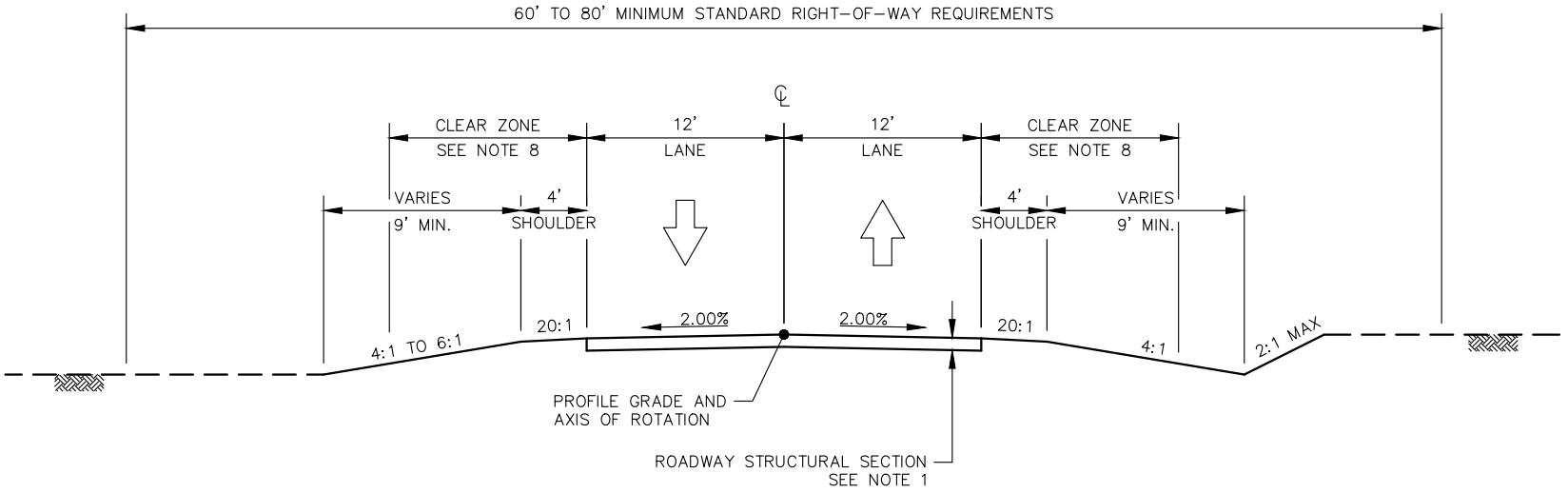
NOTES:

1. DOUBLE BITUMINOUS SURFACE TREATMENT (DBST) OVER 6" MINIMUM AGGREGATE BASE (AB) OVER 6" COMPACTED NATIVE MATERIAL (SUBGRADE). ACTUAL ROADWAY STRUCTURAL SECTION TO BE DETERMINED BY GEOTECHNICAL EVALUATION, CONSISTENT WITH DETAIL CC208-2.
2. AGGREGATE BASE SHALL BE COMPACTED TO 100% OF MAXIMUM DRY DENSITY.
3. SUBGRADE PREPARATION SHALL BE A MINIMUM 6" DEPTH OF SCARIFICATION AND RE-COMPACTION OF NATIVE MATERIAL TO A MINIMUM OF 95% OF MAXIMUM DRY DENSITY REQUIRED.
4. ROADWAY EMBANKMENT SHALL BE COMPACTED TO A MINIMUM OF 90% OF MAXIMUM DRY DENSITY.
5. DRAINAGE DITCH AS REQUIRED.
6. MINIMUM R/W REQUIREMENTS 80'TO 100', TOTAL WIDTH DETERMINED BY DRAINAGE/TOPOGRAPHY.
7. TYPICAL DESIGN ADT FOR THIS CLASSIFICATION OF ROADWAY IS BETWEEN 1,110 AND 2,600 VEHICLES PER DAY.
8. FOR CLEAR ZONE REQUIREMENTS, REFER TO THE LATEST EDITION OF THE AASHTO ROADSIDE DESIGN GUIDE (CHAPTER 3). .



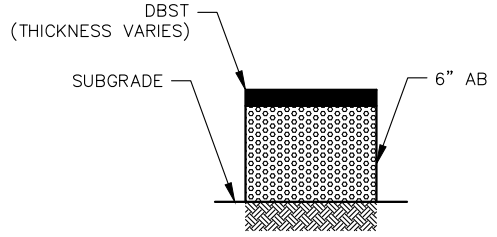
ROADWAY STRUCTURAL SECTION
TOTAL THICKNESS = 7" (APPROX.)

COCHISE COUNTY	HIGHWAY & FLOODPLAIN TYPICAL SECTION	COUNTY COLLECTOR ROAD	DRAFT 08-22-2017	DETAIL NO. CC013



NOTES:

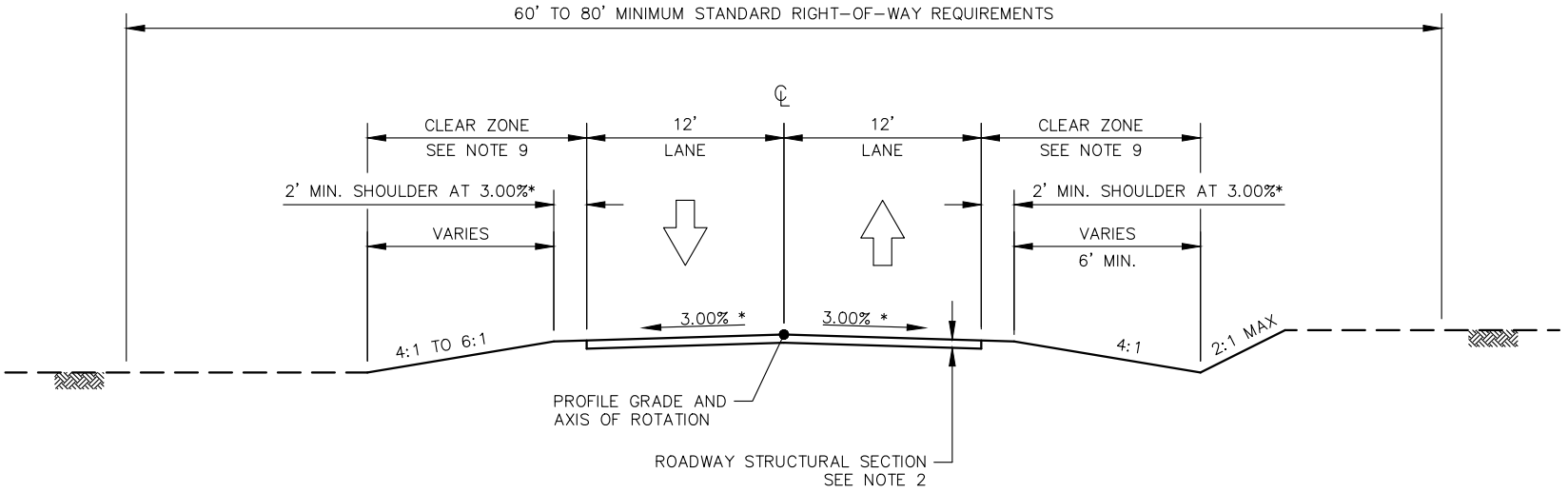
1. DOUBLE BITUMINOUS SURFACE TREATMENT (DBST) OVER 6" MINIMUM AGGREGATE BASE (AB) OVER 6" COMPACTED NATIVE MATERIAL (SUBGRADE). ACTUAL ROADWAY STRUCTURAL SECTION TO BE DETERMINED BY GEOTECHNICAL EVALUATION, CONSISTENT WITH DETAIL CC208-2.
2. AGGREGATE BASE SHALL BE COMPACTED TO 100% OF MAXIMUM DRY DENSITY.
3. SUBGRADE PREPARATION SHALL BE A MINIMUM 6" DEPTH OF SCARIFICATION AND RE-COMPACTION OF NATIVE MATERIAL TO A MINIMUM OF 95% OF MAXIMUM DRY DENSITY REQUIRED.
4. ROADWAY EMBANKMENT SHALL BE COMPACTED TO A MINIMUM OF 90% OF MAXIMUM DRY DENSITY.
5. DRAINAGE DITCH AS REQUIRED.
6. MINIMUM R/W REQUIREMENTS 60'TO 80', TOTAL WIDTH DETERMINED BY DRAINAGE/TOPOGRAPHY.
7. TYPICAL DESIGN ADT FOR THIS CLASSIFICATION OF ROADWAY IS BETWEEN 400 AND 1,110 VEHICLES PER DAY.
8. FOR CLEAR ZONE REQUIREMENTS, REFER TO THE LATEST EDITION OF THE AASHTO ROADSIDE DESIGN GUIDE (CHAPTER 3).



ROADWAY STRUCTURAL SECTION

TOTAL THICKNESS = 7" (APPROX.)

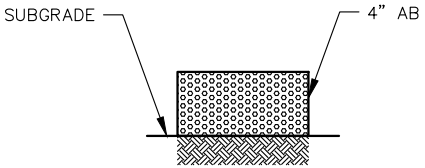
COCHISE COUNTY	HIGHWAY & FLOODPLAIN TYPICAL SECTION	MAJOR ACCESS LOCAL ROAD PAVED, LOW VOLUME	DRAFT 08-22-2017	DETAIL NO. CC014



* CROSS SLOPE: 3.00% MINIMUM, 4.00% MAXIMUM

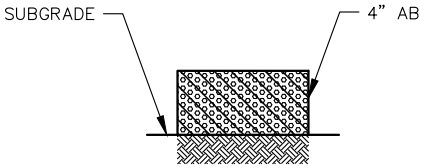
NOTES:

1. INTENDED FOR BUILDING AN IMPROVED ROAD SURFACE FOR LOW VOLUME ROADS SERVING ECOTOURISM SITES, ECONOMIC GENERATORS OR AS A PRECURSOR TO FUTURE PAVING (NOT FOR SUBDIVISION ROADS OR NEW ROADS INTENDED TO BE PUBLIC).
2. 4" STABILIZED AGGREGATE BASE (AB) OR 4" AB OVER 6" COMPACTED NATIVE MATERIAL (SUBGRADE). ACTUAL ROADWAY STRUCTURAL SECTION TO BE DETERMINED BY GEOTECHNICAL EVALUATION, CONSISTENT WITH DETAILS CC208-1 AND CC208-2. SEE ROADWAY STRUCTURAL SECTIONS.
3. AGGREGATE BASE SHALL BE COMPACTED TO 100% OF MAXIMUM DRY DENSITY.
4. SUBGRADE PREPARATION SHALL BE A MINIMUM 6" DEPTH OF SCARIFICATION AND RE-COMPCTION OF NATIVE MATERIAL TO A MINIMUM OF 95% OF MAXIMUM DRY DENSITY REQUIRED.
5. ROADWAY EMBANKMENT SHALL BE COMPACTED TO A MINIMUM OF 90% OF MAXIMUM DRY DENSITY.
6. DRAINAGE DITCH AS REQUIRED.
7. MINIMUM R/W REQUIREMENTS 60'TO 80', TOTAL WIDTH DETERMINED BY DRAINAGE/TOPOGRAPHY.
8. TYPICAL DESIGN ADT FOR THIS CLASSIFICATION OF ROADWAY IS BETWEEN 250 AND 400 VEHICLES PER DAY.
9. FOR CLEAR ZONE REQUIREMENTS, REFER TO THE LATEST EDITION OF THE AASHTO ROADSIDE DESIGN GUIDE (CHAPTER 3).
10. SOIL CEMENT, BINDERS, POLYMERS, EMULSIFIERS OR OTHER SOIL ADDITIVES TO PROVIDE ENHANCED STABILIZATION AND DUST CONTROL OF ROADWAY SURFACE APPLIED WHEN FEASIBLE.



ROADWAY STRUCTURAL SECTION

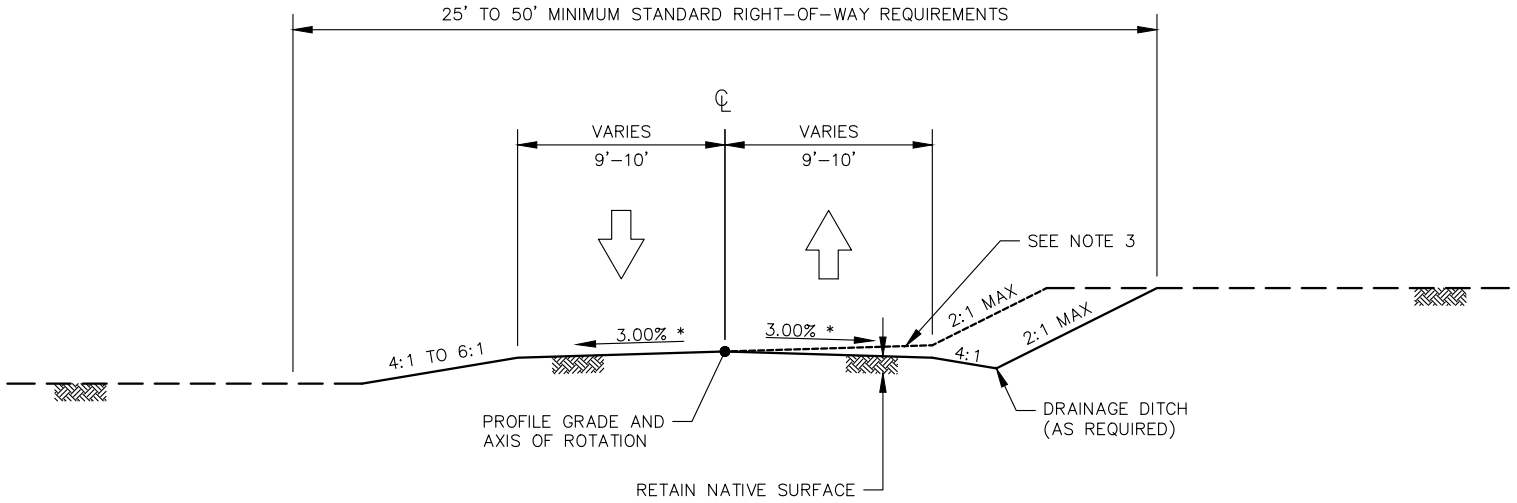
TOTAL THICKNESS = 4"



STABILIZED ROADWAY STRUCTURAL SECTION

TOTAL THICKNESS = 4"

COCHISE COUNTY	HIGHWAY & FLOODPLAIN TYPICAL SECTION	MINOR ACCESS LOCAL ROAD UNPAVED, LOW VOLUME	DRAFT 08-22-2017	DETAIL NO. CC015

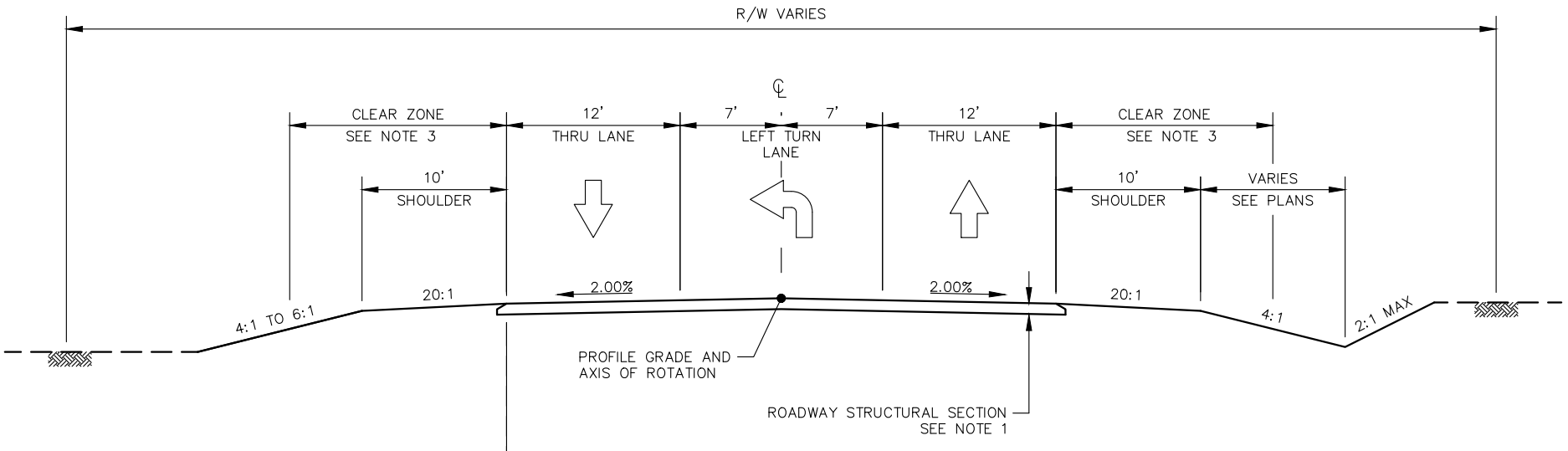


* CROSS SLOPE: 3.00% MINIMUM, 4.00% MAXIMUM

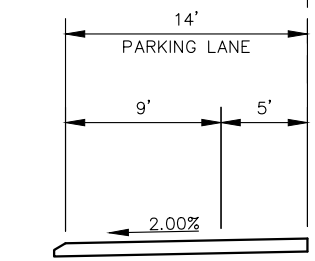
NOTES:

1. INTENDED FOR VERY LOW VOLUME ROADS WITH UNIQUE ENVIRONMENTAL, ECOLOGICAL, OR CULTURALLY SENSITIVE AREA CONSTRAINTS (NOT FOR SUBDIVISION ROAD OR NEW ROADS INTENDED TO BE PUBLIC).
2. TO USE THIS STANDARD, THE ROADWAY MUST BE DESIGNATED AS A CONTEXT SENSITIVE ROADWAY BY THE COUNTY ENGINEER.
3. LANE WIDTH DETERMINED BY TOPOGRAPHY AND SITE CONDITIONS. LANE WIDTH MAY FOLLOW LAND CONTOURS AND VARY THROUGHOUT ITS LENGTH.
4. DRAINAGE DITCH AND/OR SWALES PLACED WHERE FEASIBLE.
5. MINIMUM R/W REQUIREMENTS 25'TO 50', TOTAL WIDTH DETERMINED BY DRAINAGE/TOPOGRAPHY.
6. TYPICAL DESIGN ADT FOR THIS CLASSIFICATION OF ROADWAY IS LESS THAN 250 VEHICLES PER DAY.
7. FOR CLEAR ZONE REQUIREMENTS, REFER TO THE LATEST EDITION OF THE AASHTO ROADSIDE DESIGN GUIDE (CHAPTER 3).

COCHISE COUNTY	HIGHWAY & FLOODPLAIN TYPICAL SECTION	CONTEXT SENSITIVE ROAD UNPAVED, VERY LOW VOLUME	DRAFT 08-22-2017	DETAIL NO. CC016



LEFT TURN LANE SECTION

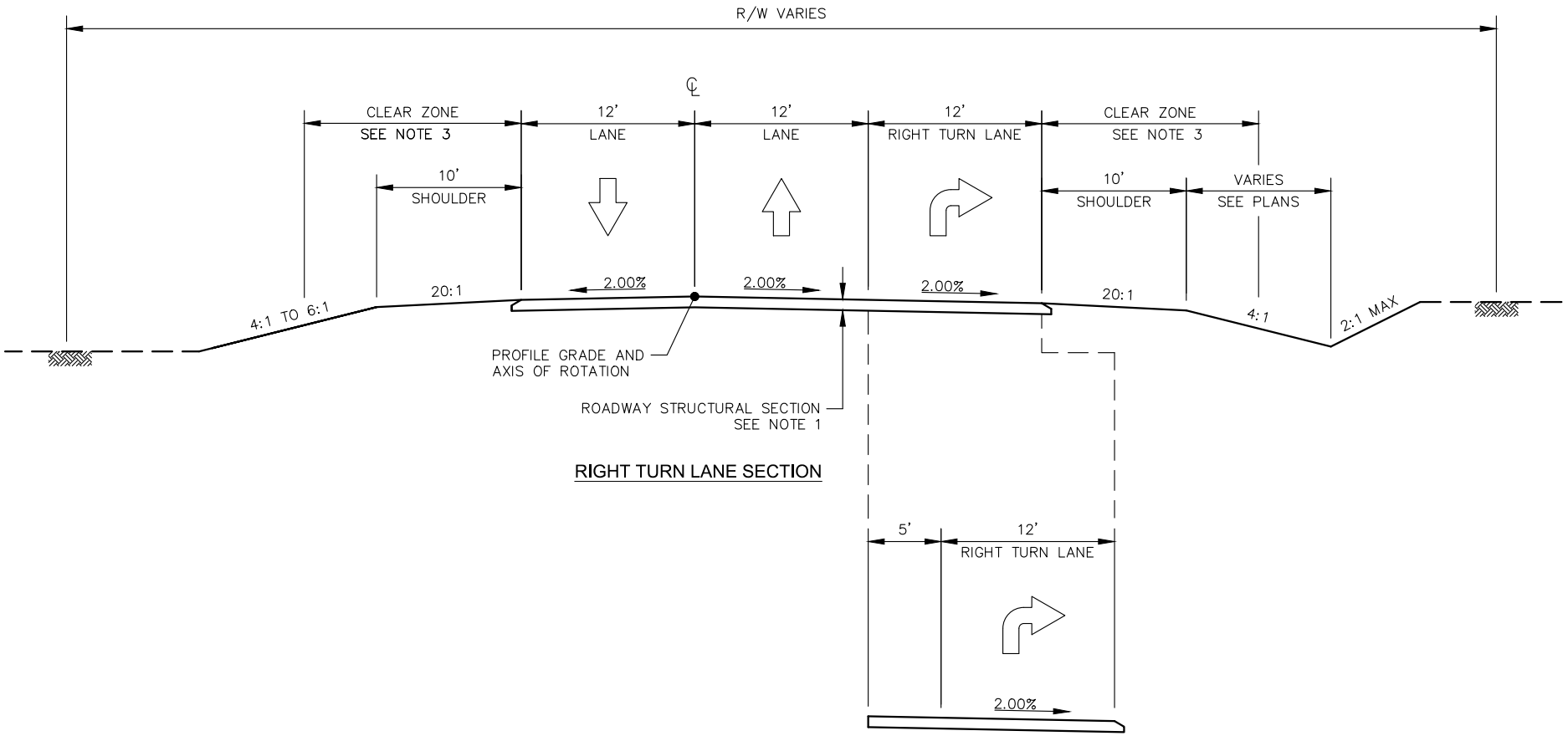


WIDENED SECTION FOR PARKING

NOTES:

1. PAVEMENT SECTION TO BE DETERMINED BY FUNCTIONAL CLASSIFICATION AND ADT AND SHALL BE CONSISTENT WITH DETAILS CC010–CC016, CC208–1 AND CC208–2.
2. MINIMUM R/W REQUIREMENTS VARY, TOTAL WIDTH DETERMINED BY DRAINAGE/TOPOGRAPHY.
3. FOR CLEAR ZONE REQUIREMENTS, REFER TO THE LATEST EDITION OF THE AASHTO ROADSIDE DESIGN GUIDE (CHAPTER 3).
4. IDENTIFYING TURN LANES, PARKING, AND BICYCLE LANES WITH APPROPRIATE STRIPING AND SIGNING SHOULD BE CONSIDERED, WHERE FEASIBLE.

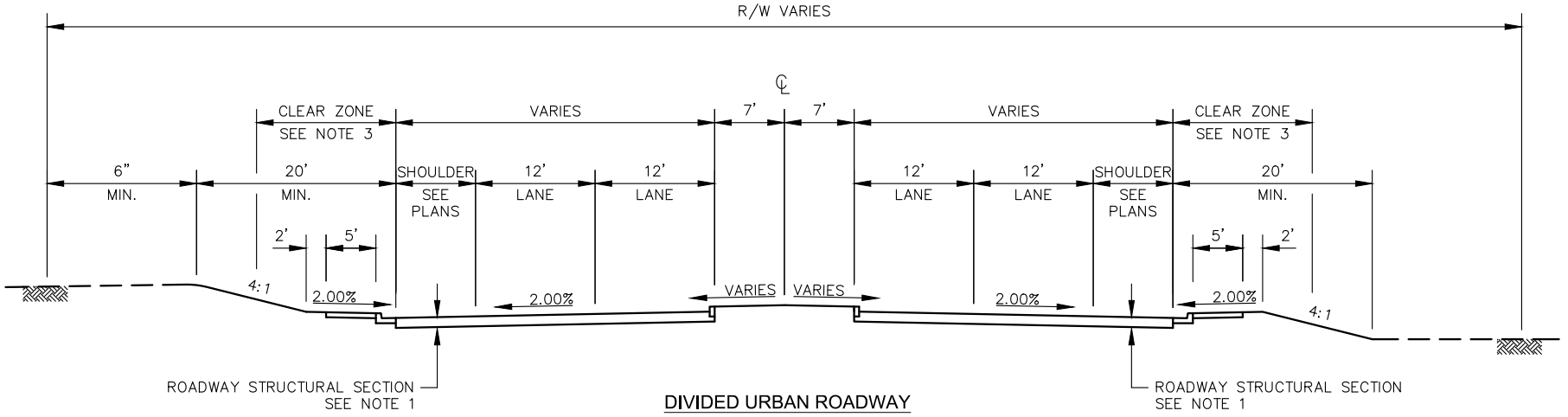
COCHISE COUNTY	HIGHWAY & FLOODPLAIN TYPICAL SECTION	TURNING LANES & MEDIANS (LEFT TURN LANE)	DRAFT 08–22–2017	DETAIL NO. CC017-1



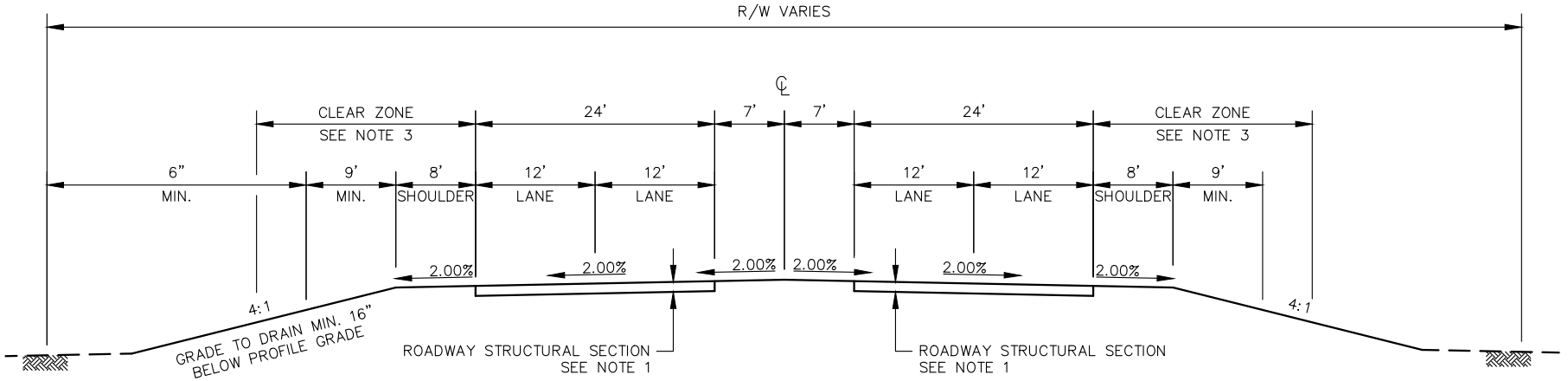
NOTES:

1. PAVEMENT SECTION TO BE DETERMINED BY FUNCTIONAL CLASSIFICATION AND ADT AND SHALL BE CONSISTENT WITH DETAILS CC010–CC016, CC208–1 AND CC208–2.
2. MINIMUM R/W REQUIREMENTS VARY, TOTAL WIDTH DETERMINED BY DRAINAGE/TOPOGRAPHY.
3. FOR CLEAR ZONE REQUIREMENTS, REFER TO THE LATEST EDITION OF THE AASHTO ROADSIDE DESIGN GUIDE (CHAPTER 3).
4. IDENTIFYING TURN LANES AND BICYCLE LANES WITH APPROPRIATE STRIPING AND SIGNING SHOULD BE CONSIDERED, WHERE FEASIBLE.

COCHISE COUNTY	HIGHWAY & FLOODPLAIN TYPICAL SECTION	TURNING LANES & MEDIANS (RIGHT TURN LANE)	DRAFT 08–22–2017	DETAIL NO. CC017-2



DIVIDED URBAN ROADWAY

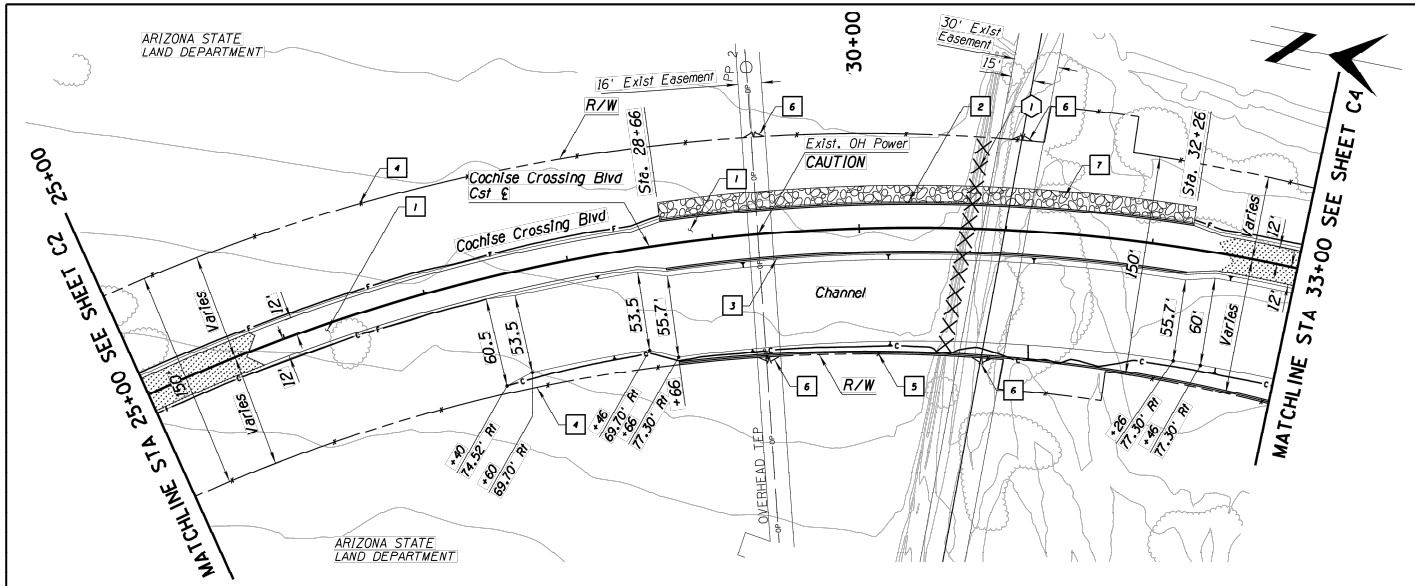


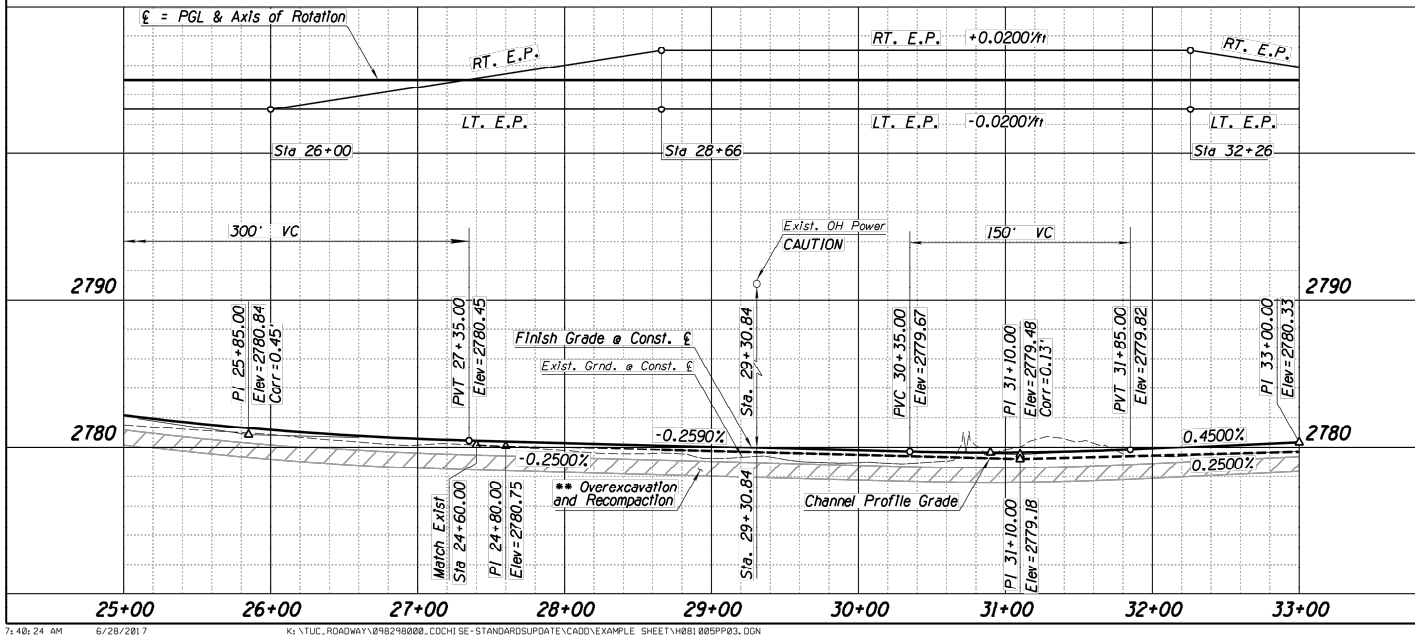
DIVIDED RURAL ROADWAY

NOTES:

1. PAVEMENT SECTION TO BE DETERMINED BY FUNCTIONAL CLASSIFICATION AND ADT. CONSISTENT WITH DETAILS CC010–CC016, CC208–1 AND CC208–2.
2. MINIMUM R/W REQUIREMENTS VARY, TOTAL WIDTH DETERMINED BY DRAINAGE/TOPOGRAPHY.
3. FOR CLEAR ZONE REQUIREMENTS, REFER TO THE LATEST EDITION OF THE AASHTO ROADSIDE DESIGN GUIDE (CHAPTER 3).
4. IDENTIFYING TURN LANES AND BICYCLE LANES WITH APPROPRIATE STRIPING AND SIGNING SHOULD BE CONSIDERED, WHERE FEASIBLE.

COCHISE COUNTY	HIGHWAY & FLOODPLAIN TYPICAL SECTION	TURNING LANES & MEDIANS (DIVIDED ROADWAY)	DRAFT 08–22–2017	DETAIL NO. CC017-3





CONSTRUCTION NOTES

No.	DESCRIPTION	UNIT	QTY
1	AC Pavement & AB Per Struc. Sec. No. 2	SY	2471
2	Concrete Cutoff Wall (1'x 4')	LF	365
3	Concrete Cutoff Wall (1'x 2')	LF	355
4	New Right-of-Way Fencing, ADOT C-12.10 Type 1	LF	1680
5	New Concrete Header (1'x 2')	LF	404
6	New Fence Gate 14' ADOT C-12.10, Type 2	EACH	4
7	Riprap (Dumped)	CY	163

Pavement

REMOVAL & RELOCATION NOTES

NO	DESCRIPTION	UNIT	QTY
1	Remove Concrete Irrigation Ditch*	LF	151
2	Remove Barb Wire Fence*	LF	0
3	Remove Curb*	LF	0
4	Remove Pavement*	SY	0

* Paid Under Item #2020001

** See Construction Note 23, 24, 25

Contact Arizona 811 at least two full working days before you begin excavation
ARIZONA811
Call 811 or click Arizona811.com

Karen Riggs, P.E., County Engineer

No.	Revision Description	Engineer	Date

Designed	C. Brown	Date
Drawn	J. Smith	06/2017
Checked	D. Patel	06/2017
Proj. Engr.	Z. Schmitt	06/2017

EXPIRES XX/XX/2018

(Engineer Logo)
1234 E. Engineer Drive
Suite 300
Lucerne, AZ 85315
(520) XXX-XXXX Fax (520) XXX-XXXX

Cochise County Highway and Floodplain Department

COCHISE CROSSING BOULEVARD
PROJECT NO. 0000
ROADWAY PLAN
STA 25+00 TO STA 33+00

Scales: Horiz. 1"=40' Vert. 1"=4' | Sheet C3 of C6 | Page 11 of 25

7:40:24 AM 6/28/2017
K:\TUC_ROADWAY\098298000_COCHISE-STANDARDSUPDATE\CADD\EXAMPLE SHEET\H081005PP03.DGN

COCHISE COUNTY | HIGHWAY & FLOODPLAIN EXAMPLE SHEET | ROADWAY PLAN AND PROFILE | DRAFT 08-22-2017 | DETAIL NO. CC020

DETAILS
for
CONSTRUCTION
within

COCHISE COUNTY

Draft FINAL August 2017

HIGHWAY AND FLOODPLAIN DEPARTMENT

SUPPLEMENT TO THE 2017 REVISION

OF THE 2015 EDITION OF THE MAG DETAILS

DRAFT

1. THESE DETAILS HAVE BEEN PREPARED IN EFFORT TO STANDARDIZE THE CONSTRUCTION DETAILS USED BY VARIOUS CONTRACTING AGENCIES IN COCHISE COUNTY. THEY ARE TO BE USED IN CONJUNCTION WITH THE CURRENT EDITION OF THE "UNIFORM STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION" SPONSORED AND DISTRIBUTED BY THE MARICOPA ASSOCIATION OF GOVERNMENTS, AND THE COCHISE COUNTY SUPPLEMENT TO THOSE SPECIFICATIONS.

2. MANY NOTES WITHIN THESE DETAILS REFER TO VARIOUS SECTIONS OF THE COCHISE COUNTY SUPPLEMENT TO MAG UNIFORM STANDARD SPECIFICATIONS. WHERE THIS REFERENCE IS MADE, ONLY THE ABBREVIATION "SECT." IS USED. WHEN NOTES WITHIN THESE DETAILS REFER TO VARIOUS SECTIONS OF THE MAG UNIFORM STANDARD SPECIFICATIONS. THE ABBREVIATION "MAG SECT." IS USED. AN EXAMPLE OF THIS REFERENCE WOULD BE: "CLASS 'A' CONCRETE PER MAG SECT. 725".

3. MANY NOTES WITHIN THESE DETAILS REFER TO OTHER DETAILS WITHIN THIS BOOK. WHERE THIS REFERENCE IS MADE, THE ABBREVIATION "DETAIL" IS USED. AN EXAMPLE OF THIS WOULD BE: "SEE DETAIL CC232 FOR TYPICAL SHARED USE PATH". WHEN DETAILS ARE REFERENCED FROM THE MAG STANDARDS, THE ABBREVIATION "MAG DETAIL" IS USED.

4. SOME DETAILS COVER MORE THAN ONE SHEET. THESE SHEETS HAVE BEEN GIVEN THE SAME NUMBER WITH A SUFFIX NUMBER, EXAMPLE: 391–1 AND 391–2.

5. AN EFFORT HAS BEEN MADE TO INCLUDE THE MOST COMMONLY USED CONSTRUCTION DETAILS IN THIS BOOK. ITEMS WHICH REQUIRE DESIGN CONSIDERATION BY THE DESIGN ENGINEER HAVE NOT BEEN INCLUDED.

6. SOME OF THESE DETAILS PRINTED HEREIN MAY BE USED BY SOME OF THE AGENCIES WITHIN COCHISE COUNTY BUT NOT OTHERS. THE DESIGN ENGINEER SHOULD THEREFORE CONTACT THE AGENCY WITHIN WHOSE JURISDICTION HE IS WORKING FOR DIRECTION AS TO WHICH DETAIL OR PORTIONS OF DETAILS SHOULD BE USED.

7. DETAIL DRAWINGS ARE NOT TO SCALE.

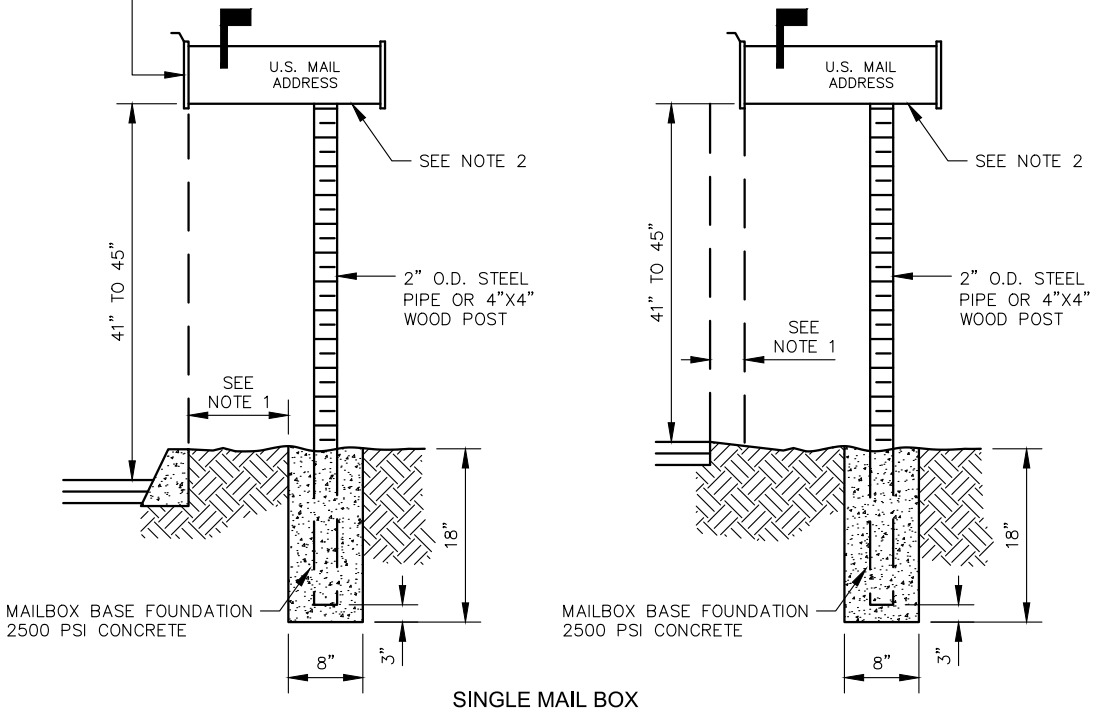
8. THE COCHISE COUNTY STANDARD DETAILS ARE SUPPLEMENT TO THE MARICOPA ASSOCIATION OF GOVERNMENT (MAG) STANDARD DETAILS. IN THE EVENT COCHISE COUNTY AND MAG DETAILS CONTAIN SIMILAR INFORMATION OR APPLICATION, THE COCHISE COUNTY DETAILS ARE INTENDED TO SUPERCEDE INFORMATION IN THE MAG DETAILS.

TRADITIONAL AND CONTEMPORARY BOX STYLES			
SIZE	INCHES (APPROXIMATE)		
	LENGTH	WIDTH	HEIGHT
1	19	6–½	8–½
1–A	21	8	10–½'
2	23–½	11–½	13–½
'OPTIONAL LETTER SLOT			

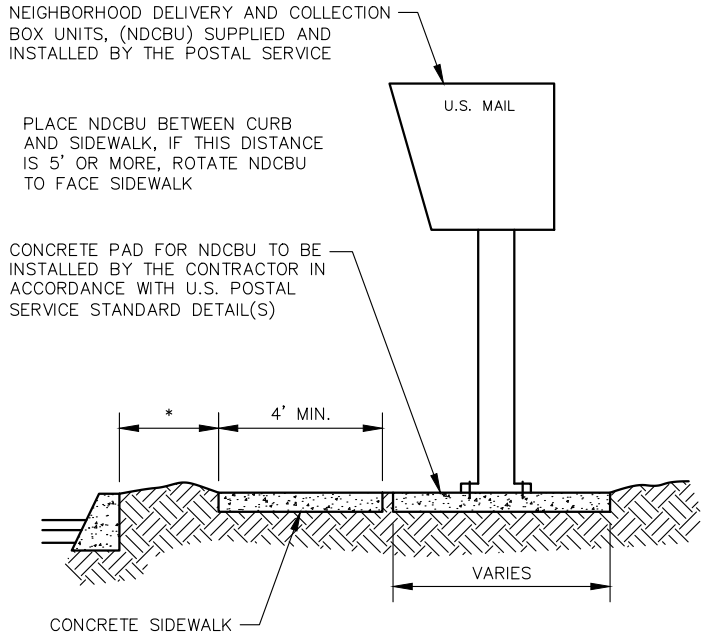
A LIST OF SUGGESTED MANUFACTURERS MAY BE OBTAINED FROM THE UNITED STATES POSTAL SERVICE.

NOTES:

1. WHERE CURB DOES NOT EXIST, FACE OF MAILBOX SHALL BE OFFSET 10' MIN. FROM EDGE OF PAVEMENT OR OR TRAVEL WAY. WHERE CURB EXISTS, FACE OF MAILBOX SHALL BE OFFSET BETWEEN 0" TO 6" FROM REAR OF CURB, WHEN FEASIBLE.
2. ADDRESS ON MAILBOX MUST FACE THE DELIVERY SIDE (ONCOMING TRAFFIC).
3. IF MAILBOX IS ON A CURVE OR IN A CUL–DE–SAC, PREFERRED PLACEMENT IS BEFORE AND AS CLOSE TO THE EDGE OF THE DRIVEWAY AS PRACTICAL.
4. APPROACH TO MAILBOX SHOULD BE CLEAR 10 FEET IN EACH DIRECTION, INCLUDING LANDSCAPING, VEHICLES, TRASH RECEPTACLES, HOLIDAY DECORATIONS, ETC.
5. NDCBU's SHALL BE LOCATED AND INSTALLED OUTSIDE OF SIGHT DISTANCE TRIANGLES (SEE DETAIL CC300). ON UNCURBED DRIVEWAYS, LOCATION OF NDCBU SHALL BE AS NOTED IN THE PLANS OR AS DIRECTED BY THE COUNTY ENGINEER.

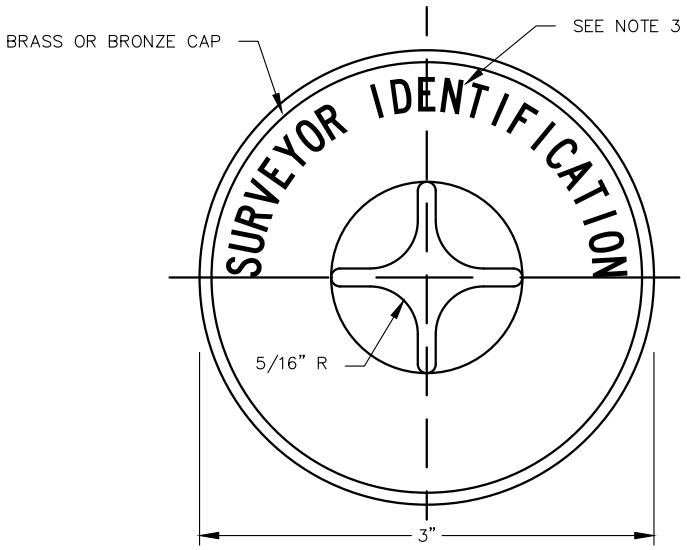


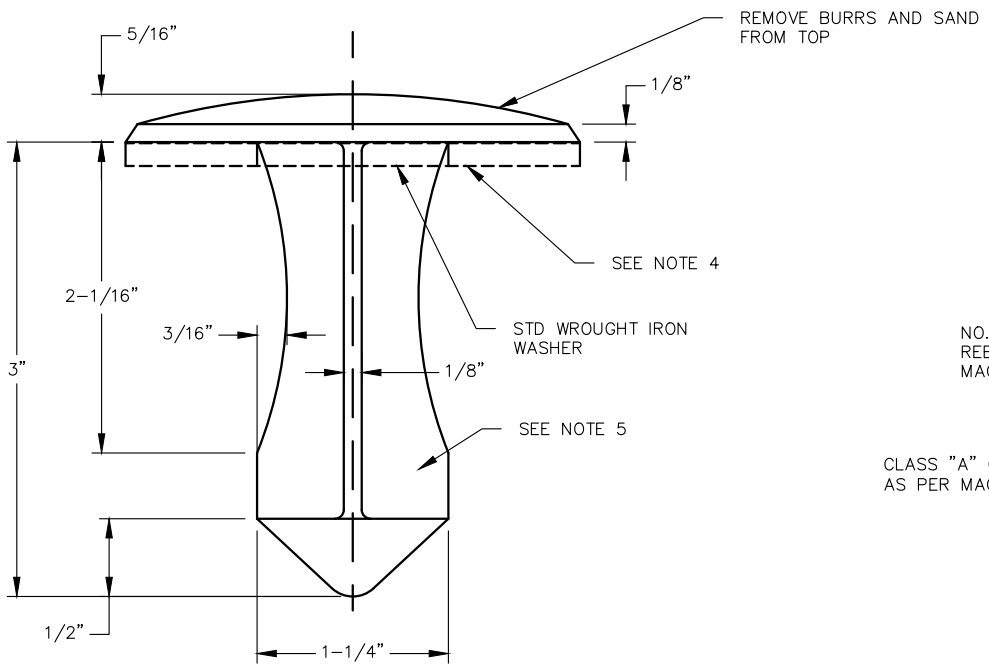
SINGLE MAIL BOX



NEIGHBORHOOD DELIVERY AND COLLECTION BOX

COCHISE COUNTY	HIGHWAY & FLOODPLAIN STANDARD DETAIL	MAIL RECEPTACLES	DRAFT 08–22–2017	DETAIL NO. CC102

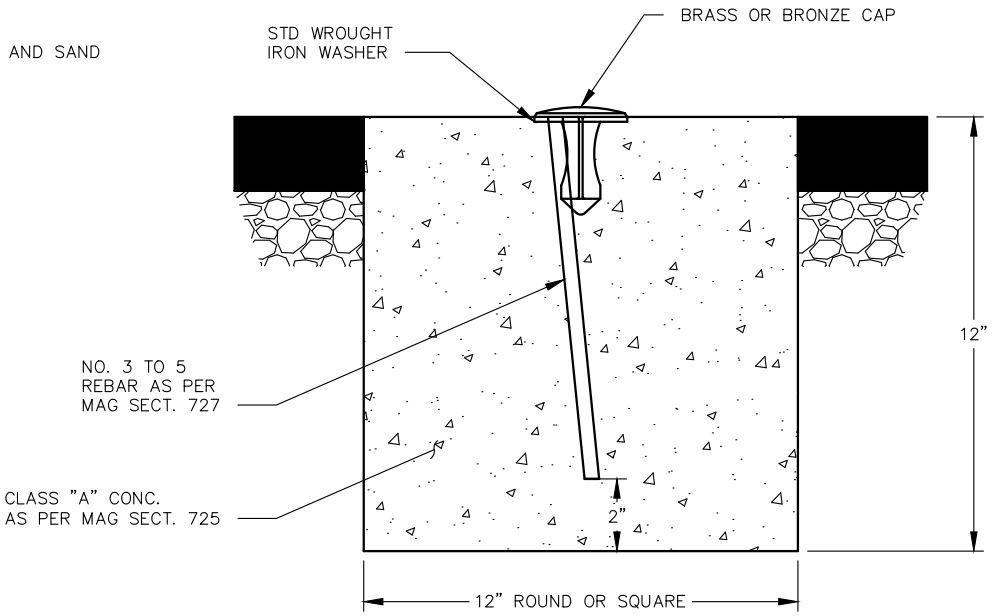




CAP DETAIL

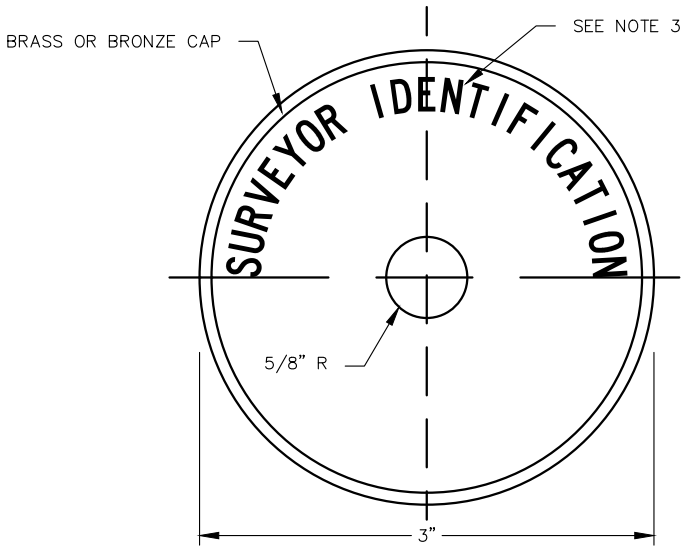
NOTES:

1. SURVEY MARKER WITH FRAME SHALL BE USED AT INTERSECTIONS OF MAJOR STREETS & COLLECTOR STREETS, AND AT OTHER SPECIAL POINTS AS SHOWN ON PLANS. SEE MAG DETAIL 120, TYPE "A".
2. SURVEY MARKER WITHOUT FRAME SHALL BE USED AT INTERSECTION OF LOCAL STREET CENTERLINES (EXCEPT WHERE TYPE "A" IS SPECIFIED), AT P.C.'s AND P.T.'s OF CURVES, AND AT OTHER POINTS AS SHOWN ON PLANS. SEE TYPE "B" BELOW, OR TYPE "D", DETAIL CC121-2..
3. LETTERS TO BE APPROX. 1/32" WIDE & 1/32" DEEP.
4. USE STANDARD WROUGHT IRON WASHER 3" O.D. X 1 1/64" THICK WITH 1-3/8" HOLE.
5. CAP TO BE CONSTRUCTED OF RED BRASS OR BRONZE.



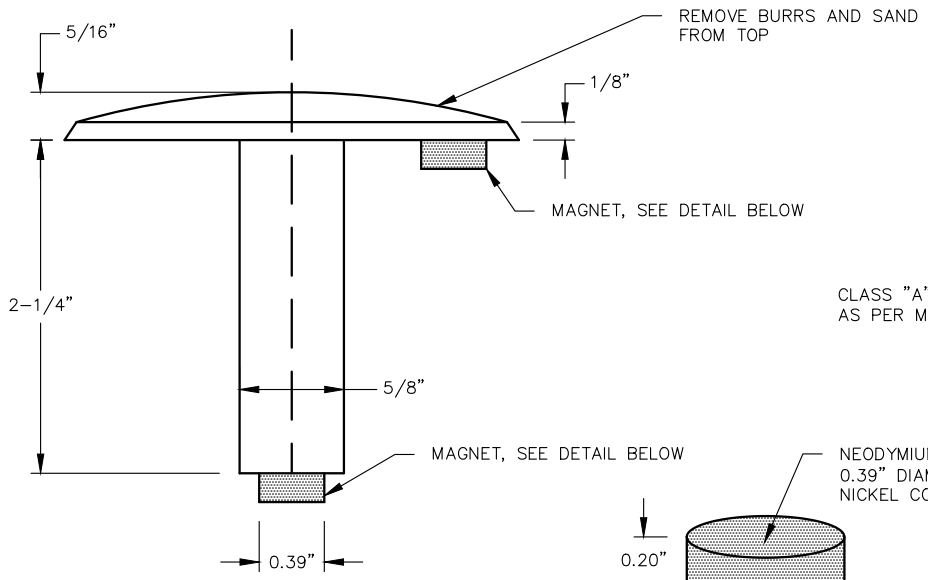
TYPE "B"
(WITHOUT FRAME)

COCHISE COUNTY	HIGHWAY & FLOODPLAIN STANDARD DETAIL	SURVEY MARKER FOR LOCAL STREETS TYPE B	DRAFT 08-22-2017	DETAIL NO. CC121-1

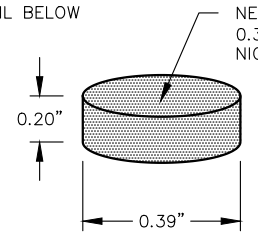


NOTES:

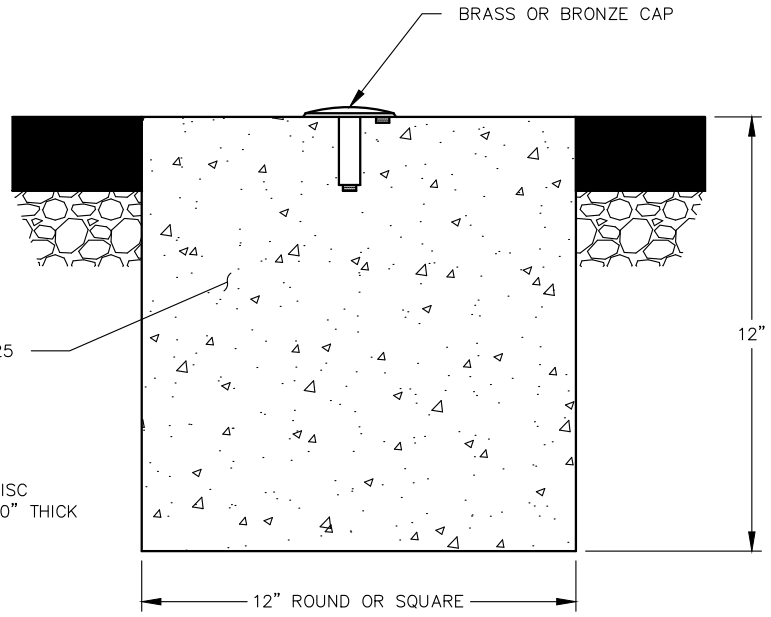
1. SURVEY MARKER WITH FRAME SHALL BE USED AT INTERSECTIONS OF MAJOR STREETS & COLLECTOR STREETS, AND AT OTHER SPECIAL POINTS AS SHOWN ON PLANS. SEE MAG DETAIL 120, TYPE "A".
2. SURVEY MARKER WITHOUT FRAME SHALL BE USED AT INTERSECTION OF LOCAL STREET CENTERLINES (EXCEPT WHERE TYPE "A" IS SPECIFIED), AT P.C.'s AND P.T.'s OF CURVES, AND AT OTHER POINTS AS SHOWN ON PLANS. SEE TYPE "B" BELOW, OR TYPE "D", DETAIL CC121–2..
3. LETTERS TO BE APPROX. 1/32" WIDE & 1/32" DEEP.
4. CAP TO BE CONSTRUCTED OF RED BRASS OR BRONZE.
5. SURVEY MARKER PLACEMENT SHALL PROVIDE MAGNETIC DETECTION LOCATORS.



CAP DETAIL



MAGNET DETAIL

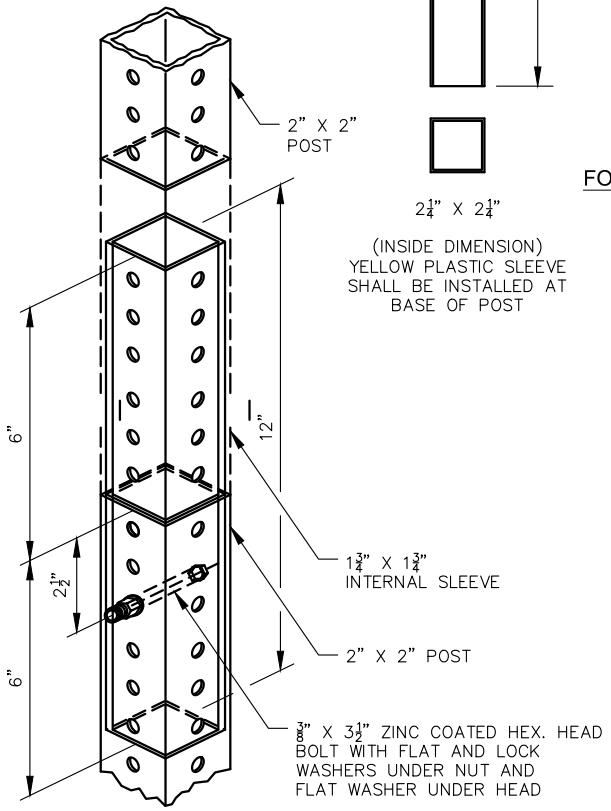


TYPE "D"
(WITHOUT FRAME)

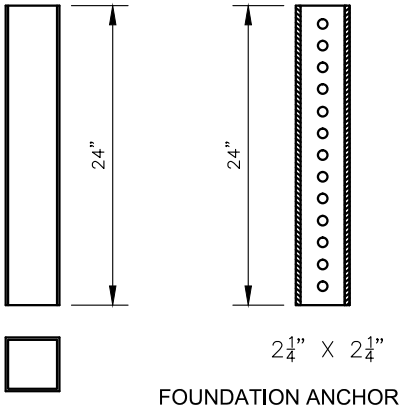
COCHISE COUNTY	HIGHWAY & FLOODPLAIN STANDARD DETAIL	SURVEY MARKER FOR LOCAL STREETS TYPE D MAGNETIC DETECTION	DRAFT 08–22–2017	DETAIL NO. CC121-2

NOTES:

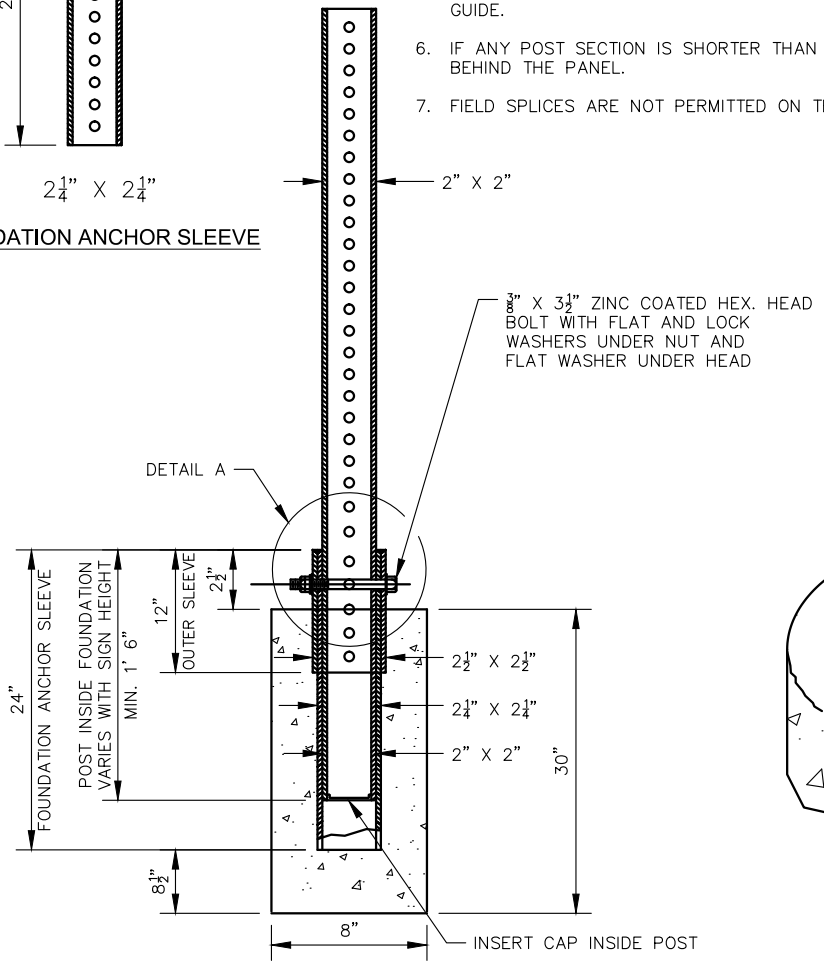
1. ALL DIMENSIONS ARE IN INCHES, EXCEPT AS NOTED.
2. SQUARE PERFORATED POST SIZE SHALL BE 2" X 2" OR AS APPROPRIATE FOR THE SIGN SIZE PER THE CURRENT ADOT SIGNING AND MARKING GUIDE.
3. FOR ESTIMATING PURPOSES, CONCRETE QUANTITY PER POST IS 1.0 CU/FT.
4. A YELLOW PLASTIC SLEEVE SHALL BE INSTALLED AT THE BASE OF ALL SIGN POSTS.
5. USE OF TELESCOPING AND/OR SLIP BASE SHALL BE DESIGNATED BY THE DESIGN ENGINEER AS NEEDED FOR THE SIGN SIZE AND LOCATION AS PER THE CURRENT ADOT SIGNING AND MARKING GUIDE.
6. IF ANY POST SECTION IS SHORTER THAN THE PANEL HEIGHT, THE FIELD SPLICE SHALL BE BEHIND THE PANEL.
7. FIELD SPLICES ARE NOT PERMITTED ON TELESCOPING POSTS.



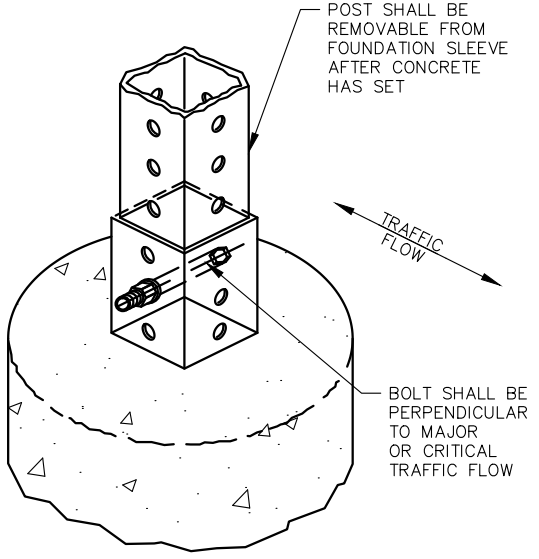
SINGLE POST PERMISSIBLE FIELD SPLICE



FOUNDATION ANCHOR SLEEVE

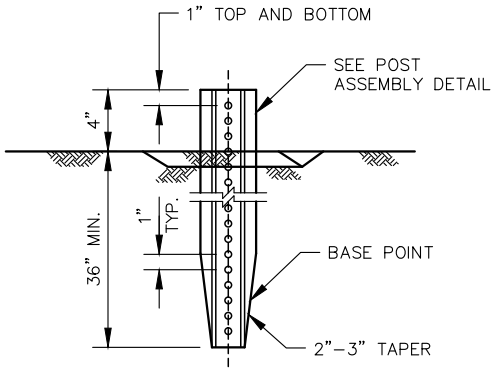


SIGN POST FOUNDATION DETAIL

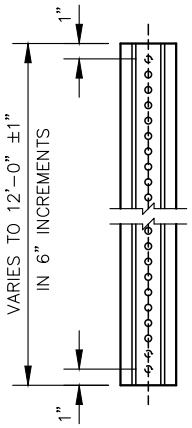


DETAIL A

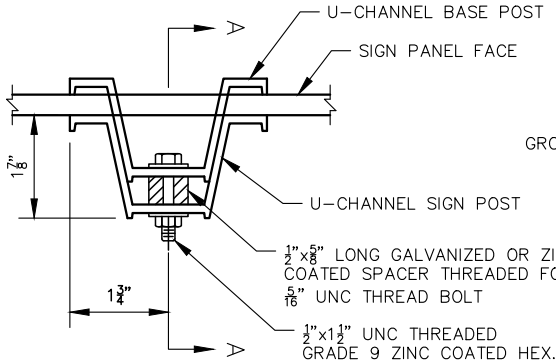
COCHISE COUNTY	HIGHWAY & FLOODPLAIN STANDARD DETAIL	SQUARE PERFORATED SIGN POST, FOUNDATION & SPLICE DETAILS	DRAFT 08-22-2017	DETAIL NO. CC132

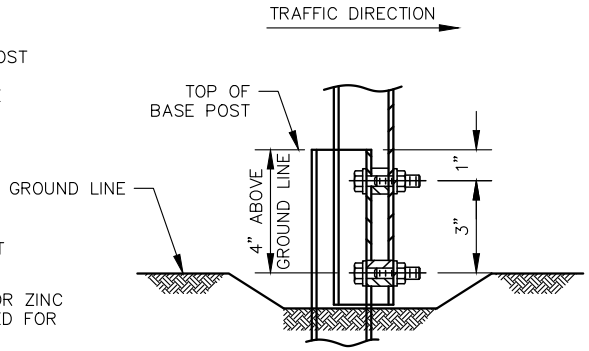


BASE POST AND INSTALLATION



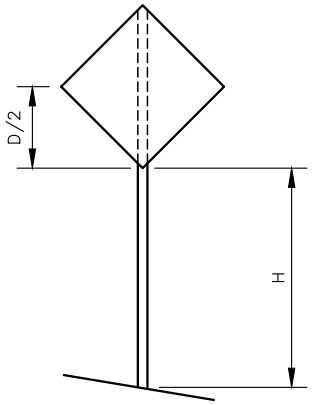
SIGN POST





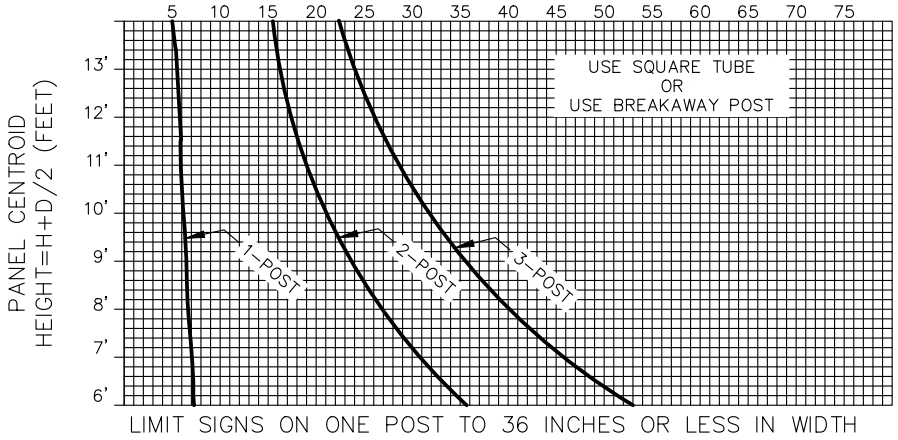
POST ASSEMBLY

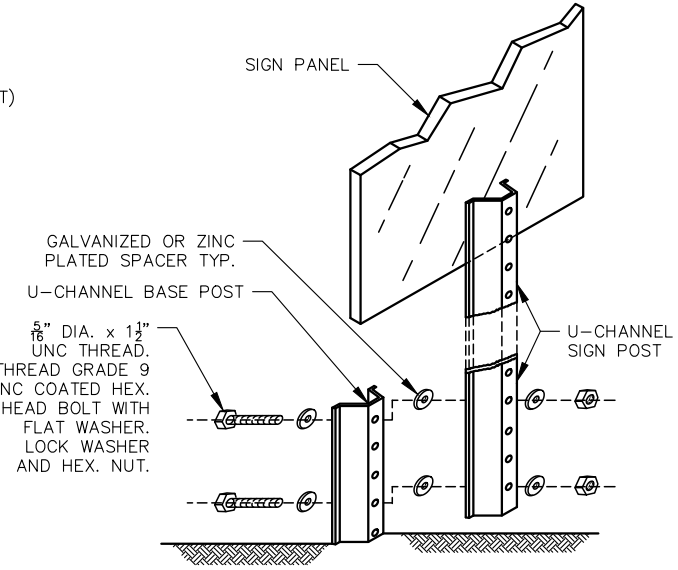
SECTION A–A



U–CHANNEL SELECTION

WIND SPEED = 70MPH (3 LBS. PER FT. POST)



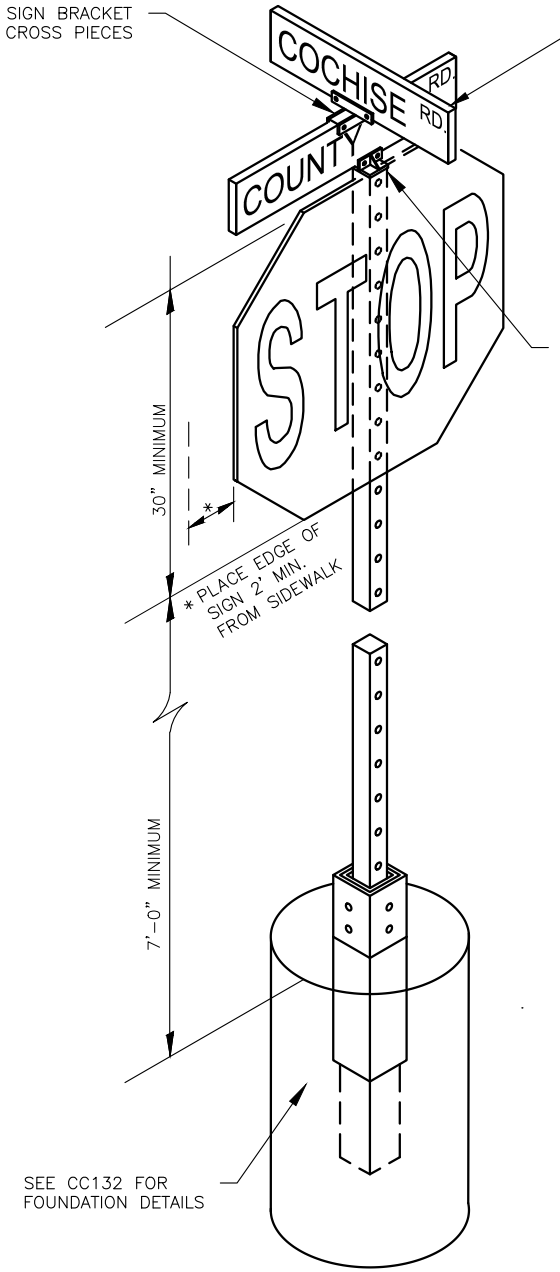


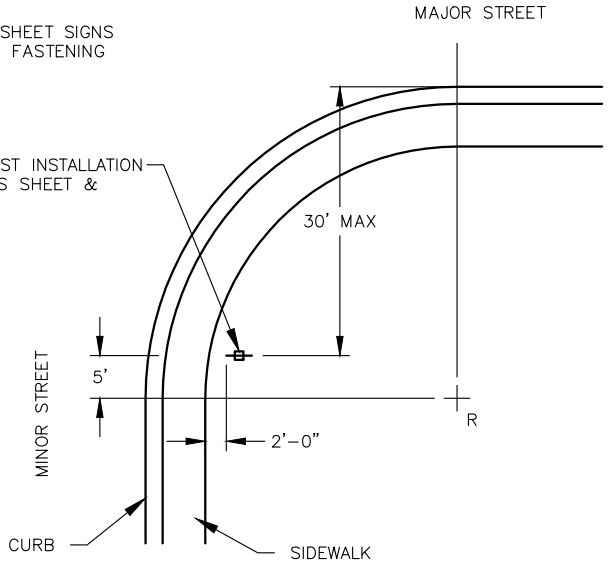
INSTALLATION PICTORIAL

NOTE:

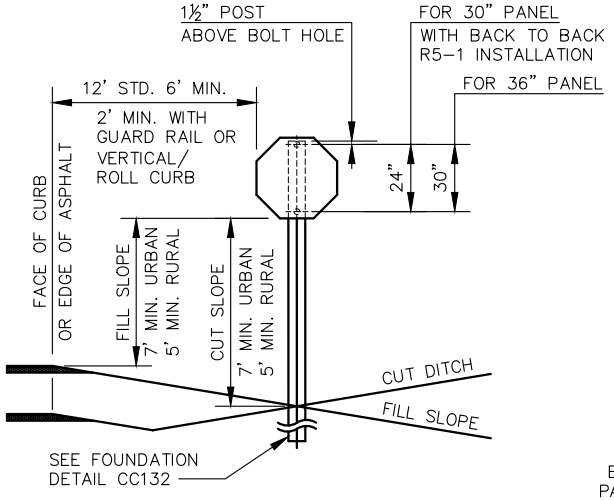
1. ALL DIMENSIONS ARE IN INCHES, EXCEPT AS NOTED.

COCHISE COUNTY	HIGHWAY & FLOODPLAIN STANDARD DETAIL	U-CHANNEL POST SELECTION AND INSTALLATION DETAILS	DRAFT 08–22–2017	DETAIL NO. CC133

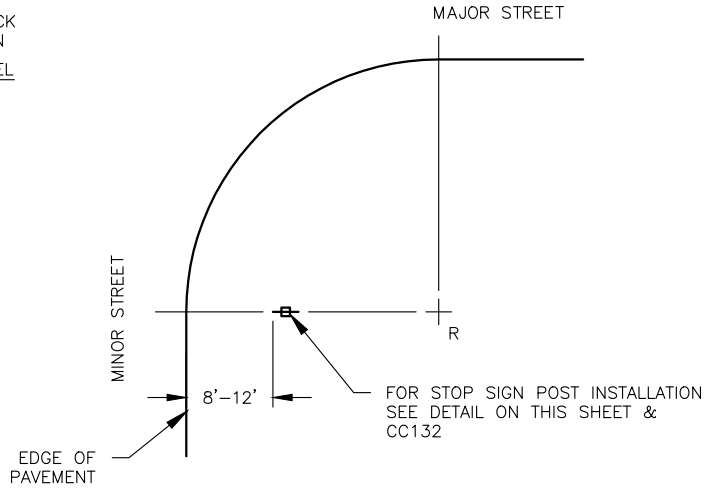




TYPICAL SUBDIVISION PLACEMENT DETAIL



STOP SIGN PLACEMENT DETAIL

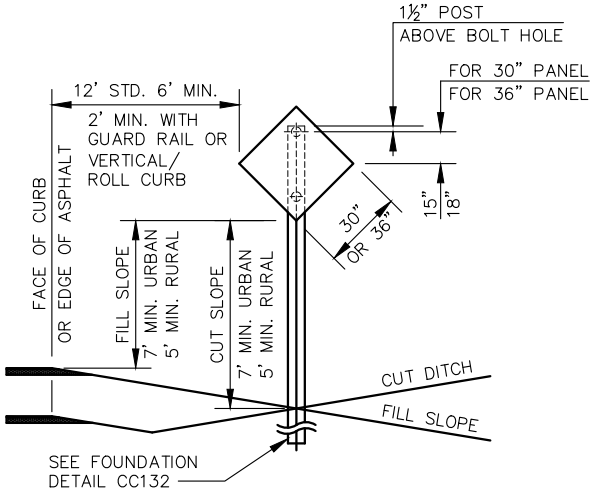


TYPICAL RURAL PLACEMENT DETAIL

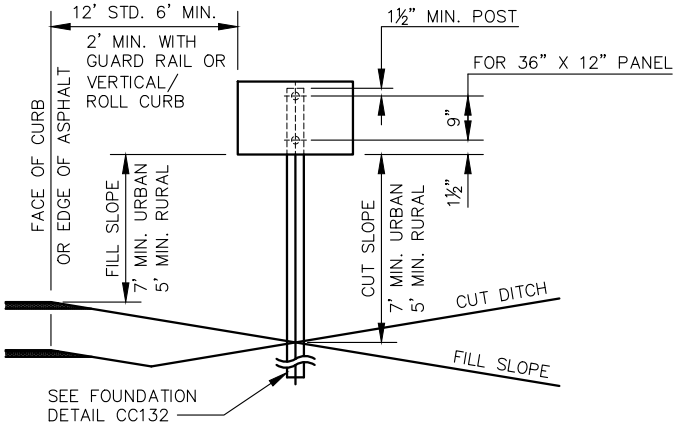
COCHISE COUNTY	HIGHWAY & FLOODPLAIN STANDARD DETAIL	OFFSETS, CLEARANCES AND MOUNTING DETAILS FOR SIGNS ON COUNTY ROADWAYS	DRAFT 08-22-2017	DETAIL NO. CC134-1

NOTES:

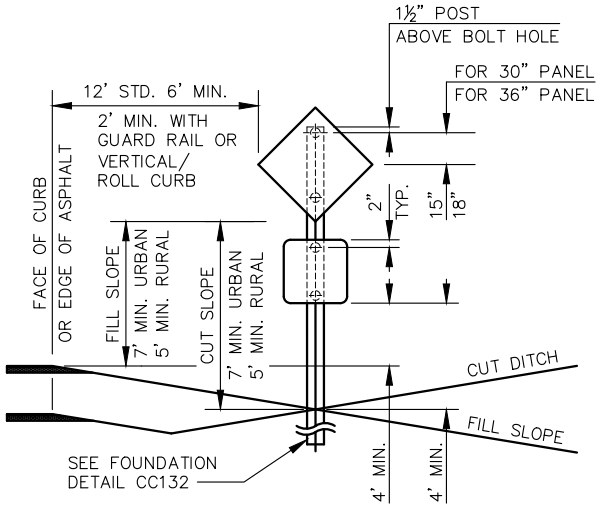
1. SEE FHWA STANDARD HIGHWAY SIGNS BOOKLET FOR PANEL BOLT HOLE. SPACING NOT SHOWN.
2. ALL DIMENSIONS IN INCHES EXCEPT AS NOTED.
3. USE GRADE #2, ZINC COATED, 18 NC THREAD, 3" X 5/16" BOLT WITH FLAT WASHER UNDER NUT AND FLAT WASHER UNDER HEAD TO ATTACH SIGN TO BRACKET.



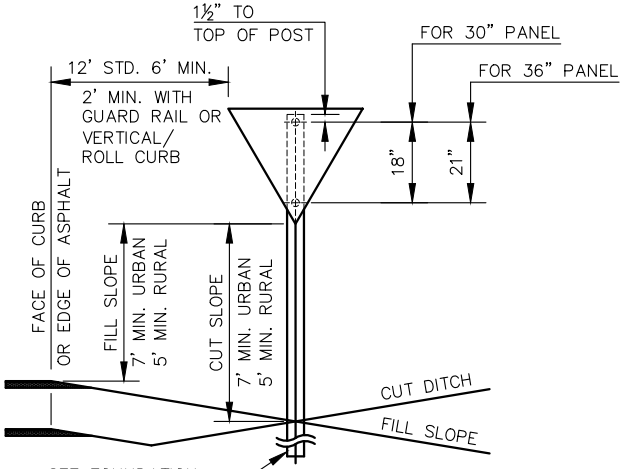
WARNING SIGN



REGULATORY SIGN
SINGLE POST

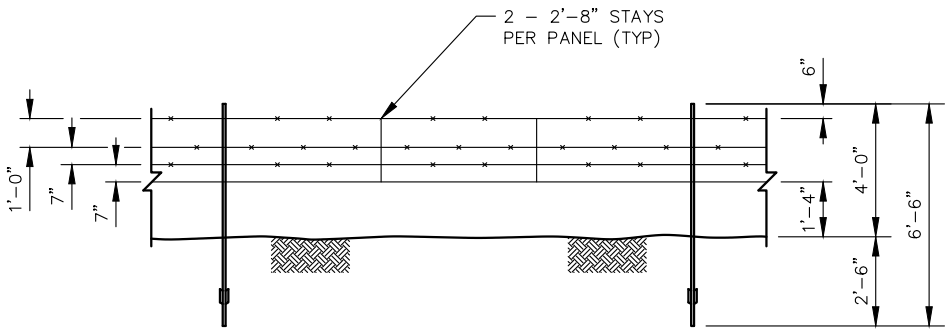


WARNING SIGN
WITH ADVISORY PLATE

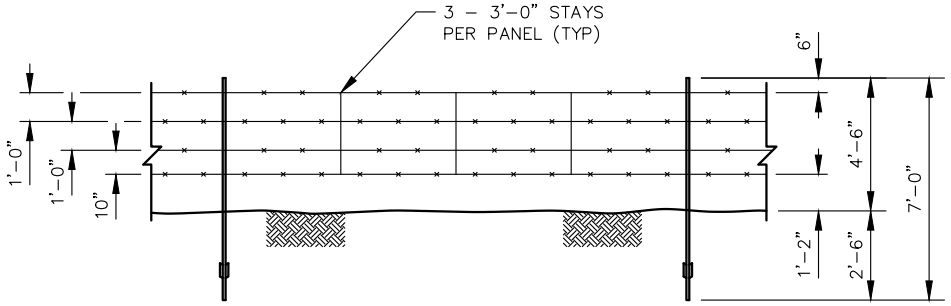


YIELD SIGN

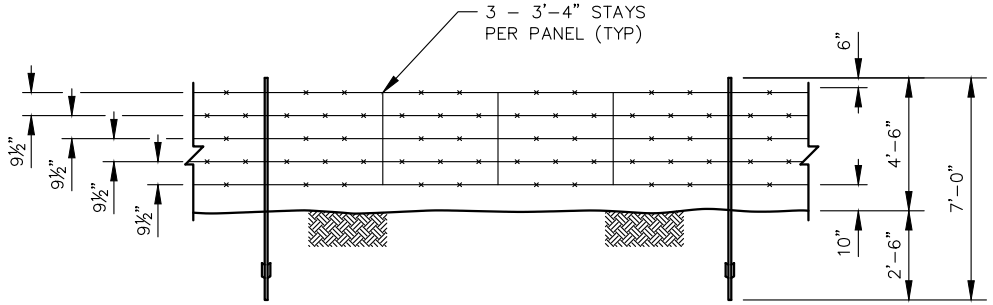
COCHISE COUNTY	HIGHWAY & FLOODPLAIN STANDARD DETAIL	OFFSETS, CLEARANCES AND MOUNTING DETAILS FOR SIGNS ON COUNTY ROADWAYS	DRAFT 08-22-2017	DETAIL NO. CC134-2



GAME FENCE (GF)



BARBED WIRE (BW) (4 WIRE)

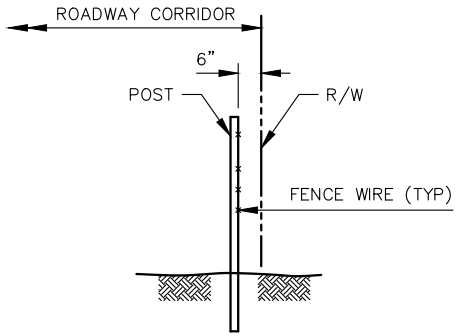


BARBED WIRE FENCE (BW) (5 WIRE)

NOTES:

1. FOR GAME FENCE THE BOTTOM WIRE SHALL BE BARBLESS.
2. STAYS SHALL BE EVENLY SPACED BETWEEN POSTS WITH SPACING NOT TO EXCEED 5 FEET – 4 INCHES FOR GAME FENCE OR 4 FEET FOR BARBED WIRE FENCE.
3. WIRE STAYS ON GAME FENCE (GF) SHALL HAVE THEIR ENDS TURNED UP TO PREVENT INJURIES TO GAME.
4. IN AREAS WITH HIGH CONCENTRATIONS OF UNGULATES (DEER, PRONGHORN, JAVALINA) CONSIDER USE OF THE BARBLESS BOTTOM WIRE PLACED NO LESS THAN 16" OFF THE GROUND, GAME FENCE HEIGHT SHOULD NOT EXCEED 42" AND BOTTOM SMOOTH WIRE PLACEMENT SHOULD NOT EXCEED 18".

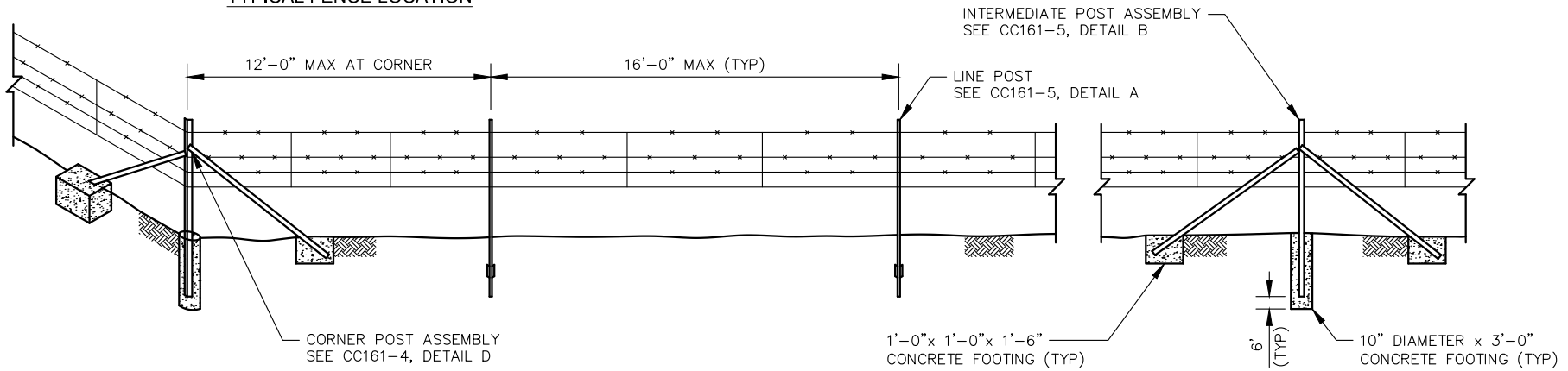
COCHISE COUNTY	HIGHWAY & FLOODPLAIN STANDARD DETAIL	FENCE, BARBED WIRE	DRAFT 08–22–2017	DETAIL NO. CC161-1

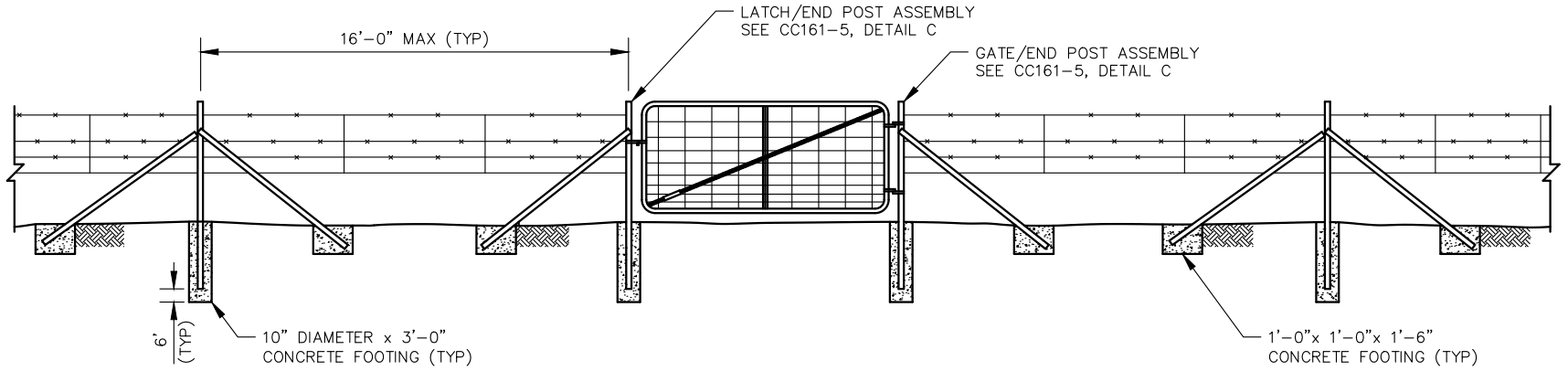


TYPICAL FENCE LOCATION

NOTES:

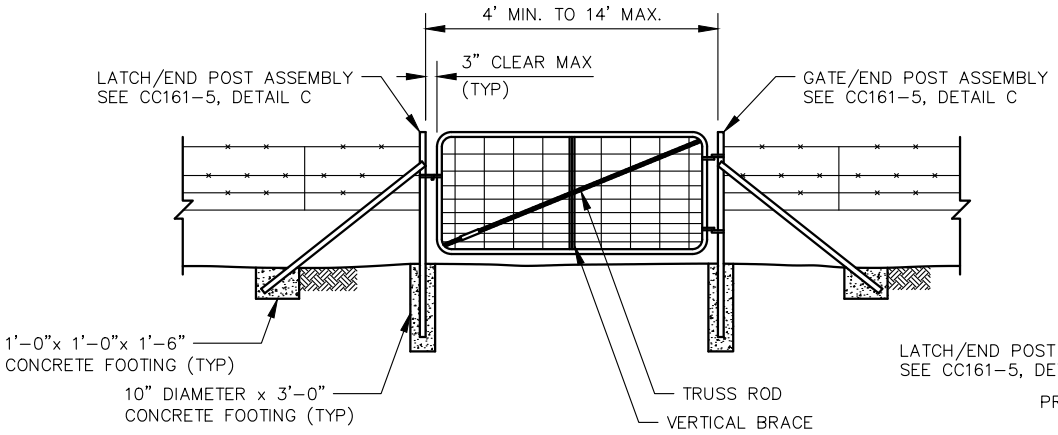
1. INTERMEDIATE POST ASSEMBLIES SHALL BE LOCATED AS SHOWN AND AT INTERVALS NOT TO EXCEED 650', OR MIDWAY BETWEEN ALL BRACED POSTS.
2. FENCE WIRE SHALL BE PLACED ON THE SIDE OF THE LINE POSTS AWAY FROM THE MAIN ROADWAY EXCEPT IN SHARPER CURVE AREAS WHERE IT SHOULD BE MOVED TO THE SIDE WITH TENSION AGAINST THE POSTS.



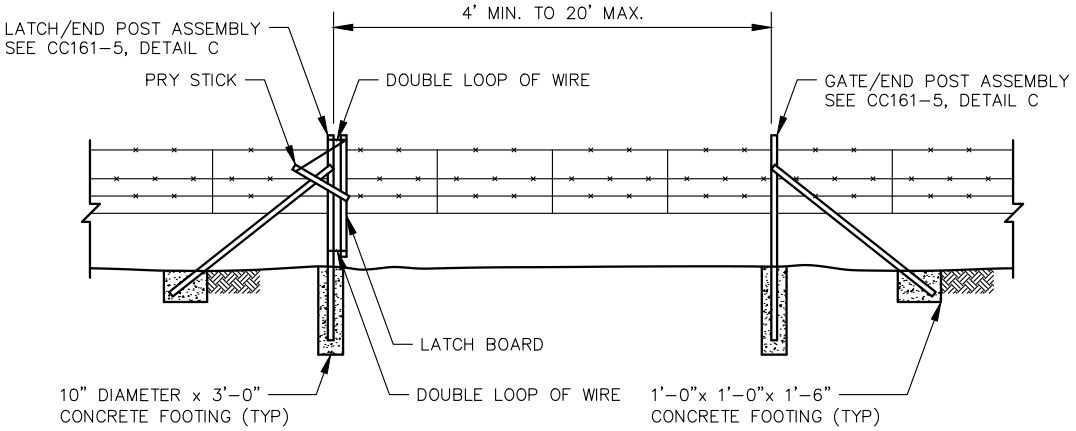


TYPICAL BARBED WIRE FENCE INSTALLATION

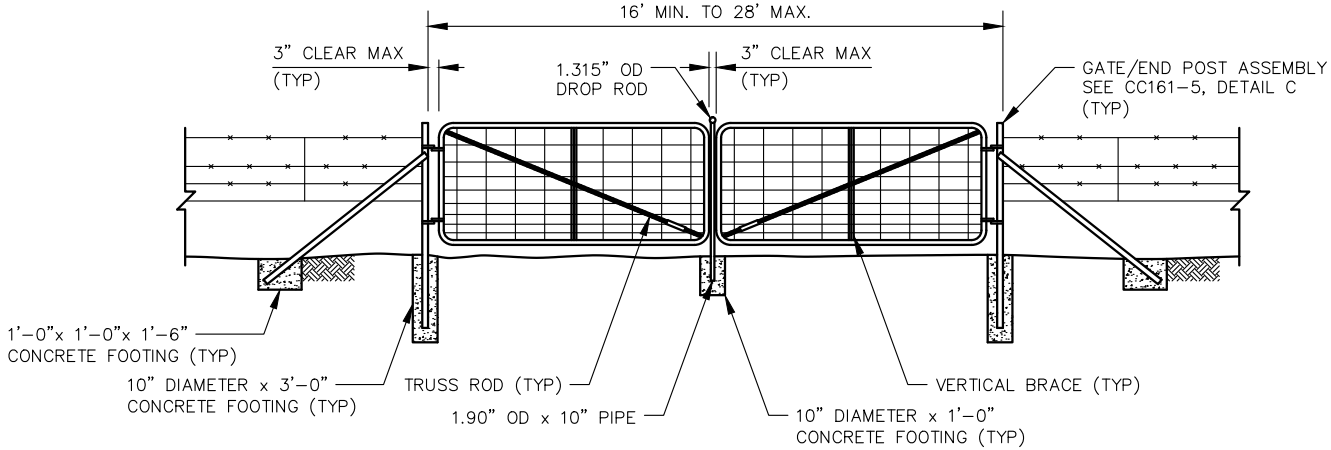
COCHISE COUNTY	HIGHWAY & FLOODPLAIN STANDARD DETAIL	FENCE, BARBED WIRE TYPICAL FENCE INSTALLATION	DRAFT 08–22–2017	DETAIL NO. CC161-2



TYPE 1 SINGLE GATE

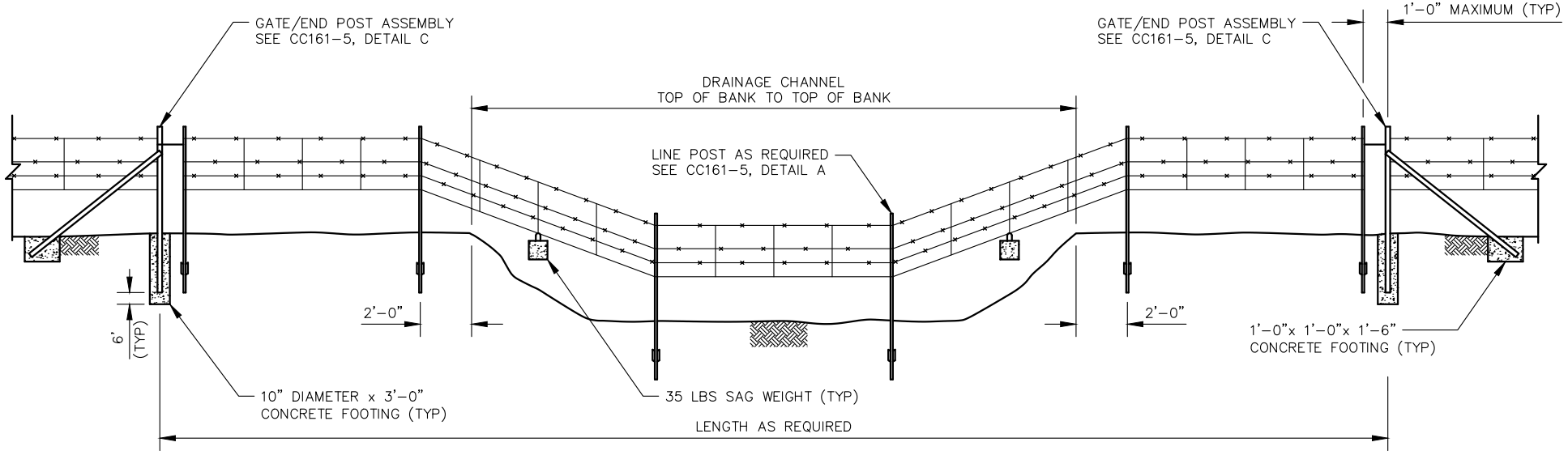


TYPE 2 GATE

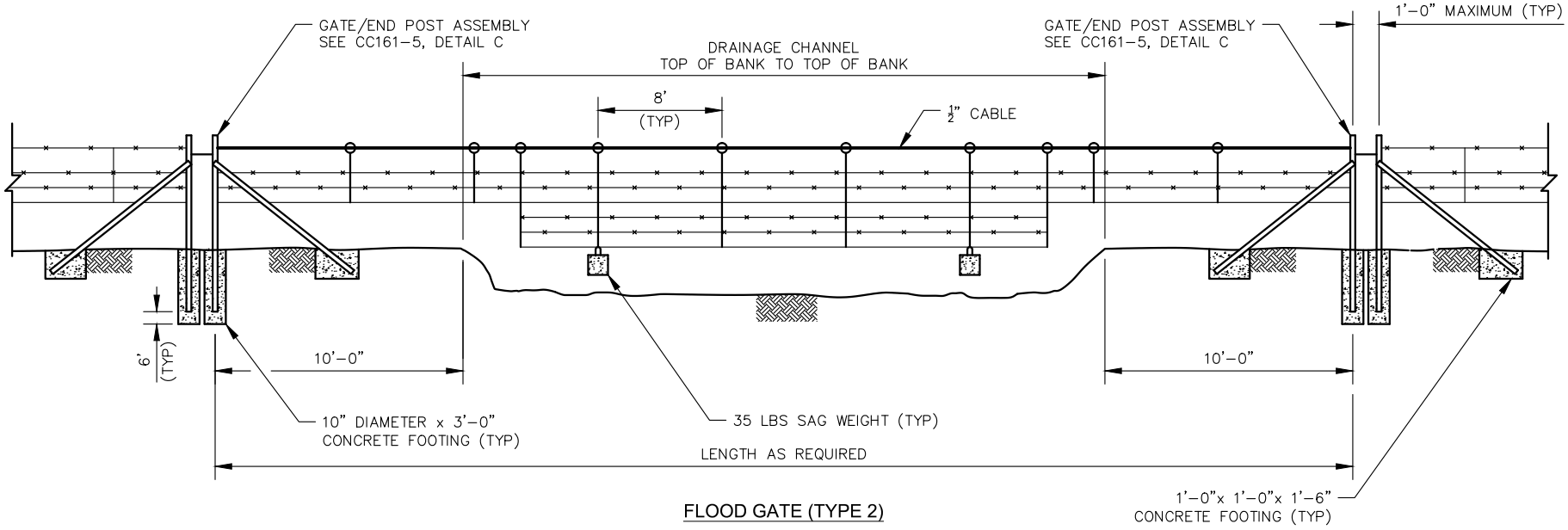


TYPE 1 DOUBLE GATE

COCHISE COUNTY	HIGHWAY & FLOODPLAIN STANDARD DETAIL	FENCE, BARBED WIRE GATES - TYPE 1 AND 2	DRAFT 08-22-2017	DETAIL NO. CC161-3



FLOOD GATE (TYPE 1)

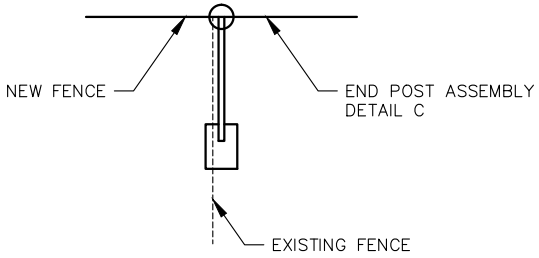


FLOOD GATE (TYPE 2)

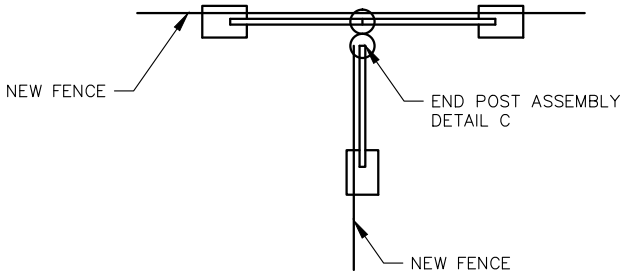
COCHISE COUNTY	HIGHWAY & FLOODPLAIN STANDARD DETAIL	FENCE, BARBED WIRE FLOOD GATE	DRAFT 08-22-2017	DETAIL NO. CC161-4

NOTES:

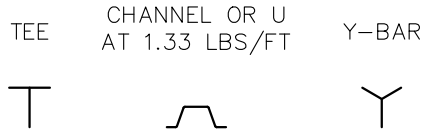
1. POST ASSEMBLIES SHALL CONSIST OF AN UPRIGHT ANGLE 2½"x2½"x¼" AT 4.10 LBS/FT, AND BRACE ANGLES 2"x2"x¼" AT 3.19 LBS/FT.



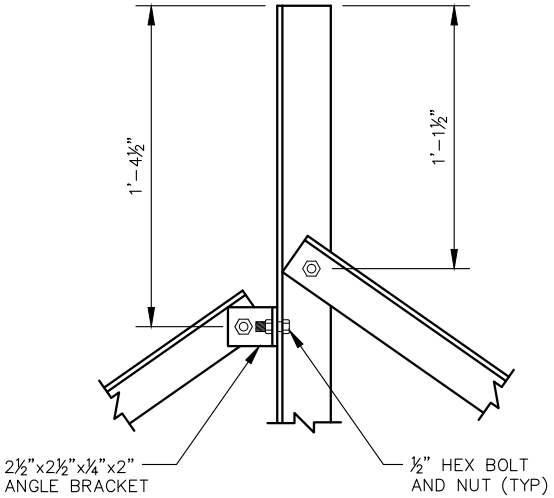
ABUTTING FENCE



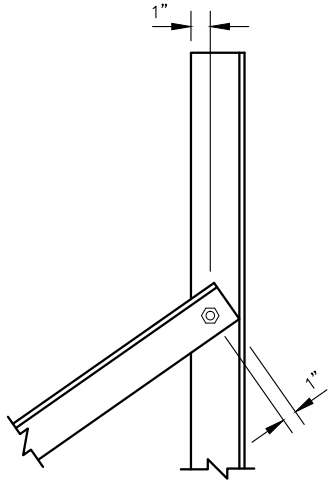
ABUTTING FENCE AT POST



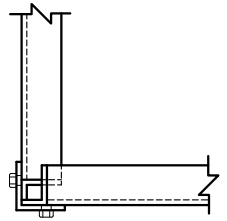
DETAIL A
TYPICAL CROSS SECTIONS
OF LINE POST SHAPES



DETAIL B
INTERMEDIATE POST ASSEMBLY

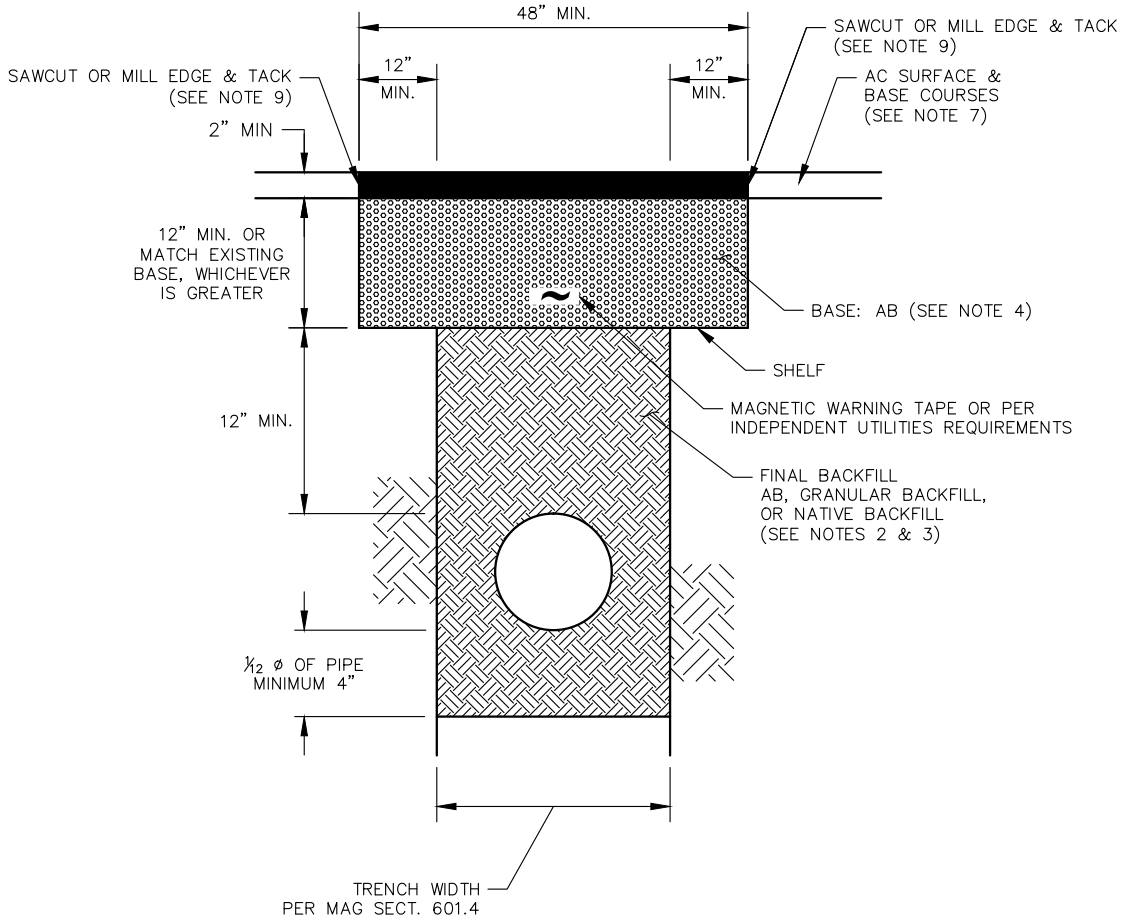


DETAIL C
END POST ASSEMBLY



DETAIL D
CORNER POST ASSEMBLY

COCHISE COUNTY	HIGHWAY & FLOODPLAIN STANDARD DETAIL	FENCE, BARBED WIRE MISCELLANEOUS DETAILS	DRAFT 08-22-2017	DETAIL NO. CC161-5



"T TOP" TRENCH REPAIR

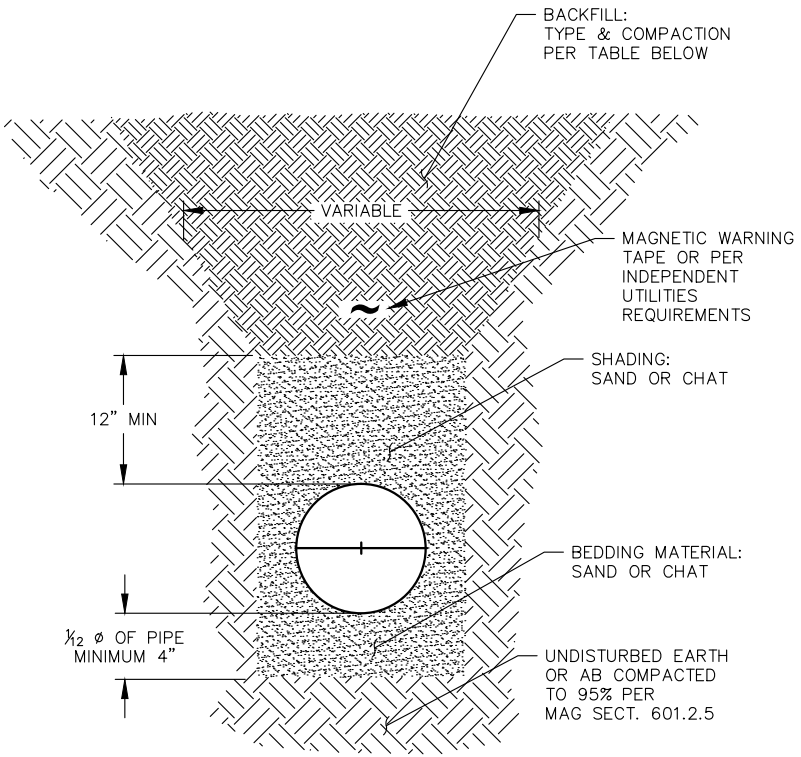
NOTES:

1. ALL TRENCHING ACROSS EXISTING PAVED STREETS OR IMPROVED DRIVEWAYS SHALL BE BORED, UNLESS OTHERWISE APPROVED BY THE COUNTY.
2. MATERIAL FOR FINAL BACKFILL SHALL BE AB, GRANULAR BACKFILL, OR NATIVE BACKFILL UNLESS OTHERWISE SPECIFIED IN APPROVED DESIGN PLANS, PERMITS, OR CONTRACT DOCUMENTS. CONTROLLED LOW STRENGTH MATERIAL (CLSM) SHALL BE 2–SACK PER MAG SECT. 604 AND 728.
3. FINAL BACKFILL SHALL BE AB, GRANULAR BACKFILL, OR NATIVE BACKFILL PER MAG SECT. 702 & 601 OR A 2–SACK CLSM PER MAG SECT. 604 AND 728 FOR TRENCH DEPTHS GREATER THAN 4'.
4. MATERIAL FOR FINAL BASE SHALL BE AB OR 2–SACK CLSM PER MAG SECT. 604 AND 728.
5. NATIVE MATERIAL MAY BE USED WHEN SUITABLE AND WITH APPROVAL OF COUNTY ENGINEER.
6. BASE, FINAL BACKFILL, AND PIPE EMBEDMENT ZONE COMPACTION SHALL BE IN ACCORDANCE WITH MAG SECT. 601.
7. ASPHALT CONCRETE SURFACE AND BASE COURSES SHALL COMPLY WITH MAG SECT. 336.2.4.1 UNLESS OTHERWISE SPECIFIED IN CONTRACT DOCUMENTS.
8. PROVIDE MINIMUM 12" WIDE SHELF AS SHOWN EXCEPT WHERE EDGE ABUTS EXISTING CONCRETE.
9. THE JOINT LOCATION OR JOINT CONFIGURATION MAY VARY FROM THAT SHOWN TO ELIMINATE REMNANTS, TO ELIMINATE FULL DEPTH SAWCUT JOINTS FROM BEING LOCATED WITHIN A WHEEL PATH AS REQUIRED BY MAG SECT. 336, OR WHEN AN OFFSET JOINT IS CONSTRUCTED.
10. WHEN MECHANICAL COMPACTION IS USED, BACKFILL SHALL BE PLACED IN LIFTS NO GREATER THAN 2', TO WITHIN 4' OF FINISHED GRADE. FROM A DEPTH OF 4' TO FINISHED GRADE, THE LIFTS SHALL NOT EXCEED 1'.
11. MATERIAL SPECIFICATIONS AND TESTING SHALL BE REQUIRED TO DEMONSTRATE CONFORMANCE WITH THIS DETAIL, UNLESS OTHERWISE DIRECTED BY THE COUNTY ENGINEER.

COCHISE COUNTY	HIGHWAY & FLOODPLAIN STANDARD DETAIL	PAVED TRENCH BACKFILL AND SURFACE REPLACEMENT	DRAFT 08–22–2017	DETAIL NO. CC200-1

TRENCH REQUIREMENTS:

1. A WIDER TRENCH SHALL BE ALLOWED IF A PULLBOX IS USED AS MEANS FOR TRENCH SHORING.
2. FOR ALL EXCAVATION AND TRENCHES, THE CONTRACTOR SHALL ADHERE STRICTLY WITH OSHA CFR PART 1926 SUBPART P.
3. TRENCH EXCAVATIONS OVER 20' IN DEPTH SHALL HAVE AN APPROVED SHORING PLAN, STAMPED BY AN AZ REGISTERED PROFESSIONAL ENGINEER, TO BE SUBMITTED BY THE CONTRACTOR FOR REVIEW BY COCHISE COUNTY.



TRENCH BACKFILL MATERIALS

NATIVE MATERIAL:

4. NATIVE MATERIAL MAY BE USED WHEN SUITABLE AND WITH APPROVAL OF COUNTY ENGINEER.
5. MATERIAL SPECIFICATIONS AND TESTING SHALL CONFORM TO MAG SECT. 601.4.
6. AT A MINIMUM, THE MATERIAL SHALL MEET THE FOLLOWING REQUIREMENTS:
   A. MATERIAL IS FREE OF BROKEN CONCRETE, BROKEN PAVEMENT, RUBBISH, CHUNKS OF CLAY, WOOD, ORGANIC MATERIAL, OR OTHER DELETERIOUS MATERIAL.
   B. MATERIAL DOES NOT CONTAIN ROCK OR STONES LARGER THAN 3".
7. WHEN MECHANICAL COMPACTION IS USED, BACKFILL SHALL BE PLACED IN LIFTS NO GREATER THAN 2', TO WITHIN 4' OF FINISHED GRADE. FROM A DEPTH OF 4' TO FINISHED GRADE, THE LIFTS SHALL NOT EXCEED 1'.
8. FOR PAVED TRENCH BACKFILL, SEE DETAIL CC200-1.

AGGREGATE BASE

- AGGREGATE BASE PER DETAIL CC200-3
- RECLAIMED CONCRETE MATERIAL (RCM) IN ACCORDANCE WITH MAG SECT. 701.4 MAY BE SUBSTITUTED FOR AGGREGATE BASE

NON SHRINK SLURRY

- TWO SACK TYPE II PORTLAND CONCRETE CEMENT PER CUBIC YARD.
- TYPE B SELECT AGGREGATE PER MAG 702, OR AGGREGATE BASE COURSE, OR RECLAIMED CONCRETE MATERIAL PER DETAIL CC200-3.

ALLOWABLE BEDDING & SHADING SAND OR CHAT

- 100% PASSING 1/2" SIEVE.
- SUM OF PI PLUS 200 SIEVE SHALL BE LESS THAN 23.

TRENCH WIDTH CHART 1

SIZE OF PIPE (I.D.)	MAXIMUM WIDTH AT TOP OF PIPE GREATER THAN O.D. OF BARREL	MINIMUM WIDTH AT SPRINGLINE EA. SIDE OF PIPE
LESS THAN 18"	20"	8"
18" TO 24"	23"	9.5"
27" TO 39"	28"	12"
42" TO 60"	34"	14"
OVER 60"	PER MAG. TABLE 601-1, FLEX PIPES	

* 200 SIEVE TO BE DETERMINED BY ASTM. D4318, DRY PREP, OR AASHTO T-90.

BACKFILL REQUIREMENTS

	TRENCHING IN RIGHT OF WAY OUTSIDE ROADWAY PRISM OR IN UNPAVED ALLEY		TRENCHING IN EXISTING ROADWAY PRISM		TRENCHING IN PROPOSED ROADWAY PRISM	
	ALLOWABLE BACKFILL MATERIALS	COMPACTION REQUIREMENT	ALLOWABLE BACKFILL MATERIALS	COMPACTION REQUIREMENT	ALLOWABLE BACKFILL MATERIALS	COMPACTION REQUIREMENT
NATIVE MATERIAL WITHOUT FINES REQUIREMENT	X	95%				
NATIVE MATERIAL WITH FINES REQUIREMENT	X	95%			X	100%
AGGREGATE BASE	X	95%	X	100%	X	100%
NON SHRINK SLURRY	X	NA	X	NA	X	NA

COCHISE COUNTY

HIGHWAY & FLOODPLAIN STANDARD DETAIL

UNPAVED STORM DRAIN / SEWER / UTILITY TRENCH BACKFILL & BEDDING COMPACTION

DRAFT 08-22-2017

DETAIL NO. CC200-2

AGGREGATE BASE COURSE

702.2.1 REPLACE TABLE 702–1 OF THE MAG STANDARD CONSTRUCTION SPECIFICATIONS WITH THE FOLLOWING:

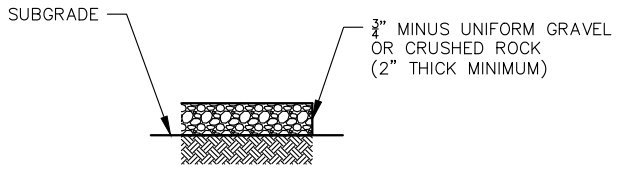
REVISED TABLE 702–1			
Sieve Analysis Test Methods AASHTO T–27, T–11			
Sieve Size	Accumulative Percentage Passing Sieve, by Weight		
	Select Material		Aggregate Base Course
	Type A	Type B	
3 IN.	100	–	–
1–1/2 IN.	–	100	100
1 IN.	–	–	90–100
NO. 4	30–75	30–70	32–65
NO. 8	20–60	20–60	20–60
NO. 30	10–40	10–40	10–40
NO. 200	0–12	0–12	3–12
Plasticity Index Test Methods AASHTO T–89 Method A, T–90, T146 Method A			
MAXIMUM ALLOWABLE VALUE	5	5	5
Fractured Face, One Face Test Method ARIZ 212, Percent by Weight of the Material Retained on a #4 Sieve			
MINIMUM REQUIRED VALUE	50	50	50
Resistance to Degradation and Abrasion by the Los Angeles Abrasion Machine Test Method AASHTO T–96, Percent Loss by Weight			
MAXIMUM ALLOWABLE VALUE AT 100 REVOLUTIONS	10	10	10
MAXIMUM ALLOWABLE VALUE AT 500 REVOLUTIONS	45	45	45

NOTES:

1. DRIVEWAY DETAILS SHALL BE NOTED ON PLANS AS FOLLOWS: DRIVEWAY TYPE, LENGTH, WIDTH, AND RADII.
2. RESIDENTIAL DRIVEWAYS TYPICALLY PROVIDE ACCESS TO ONE SINGLE FAMILY RESIDENCE: ACCESS TO TWO OR MORE RESIDENTIAL PARCELS IS CONSIDERED A ROADWAY ACCESS APRON (SEE CC205-3).
3. DRIVEWAYS TO BE PERPENDICULAR TO THE ROADWAY UNLESS OTHERWISE NOTED ON PLANS.
4. DRIVEWAY RADII OR CHAMFERS MUST REMAIN WITHIN THE PROJECTION OF THE SUBJECT PARCEL'S PROPERTY LINES AND SHALL NOT ENCROACH UPON ANY PART OF ADJACENT PROPERTIES' ROADWAY FRONTAGE.

NOTES (CONTINUED):

5. TYPE "S" DRIVEWAY SHALL BE AS CLOSE TO 90° AS POSSIBLE AND SHALL BE NO LESS THAN 60° WITHOUT APPROVAL BY THE COUNTY ENGINEER OR THEIR DESIGNATED REPRESENTATIVE.
6. DRIVEWAY STRUCTURAL SECTION MAY BE NATIVE-SURFACED OR AN IMPROVED SURFACE (GRAVEL, CONCRETE, DBST, ASPHALT).
7. DRAINAGE STRUCTURES SHALL BE PROVIDED UNDER DRIVEWAYS, WHERE NECESSARY.
8. CONSTRUCTION OF CURB, GUTTER, SIDEWALK OR PATHWAY MAY BE REQUIRED AS A CONDITION OF PERMIT APPROVAL.
9. DESIRABLE SIDESLOPES FOR DRIVEWAYS IS 6:1.

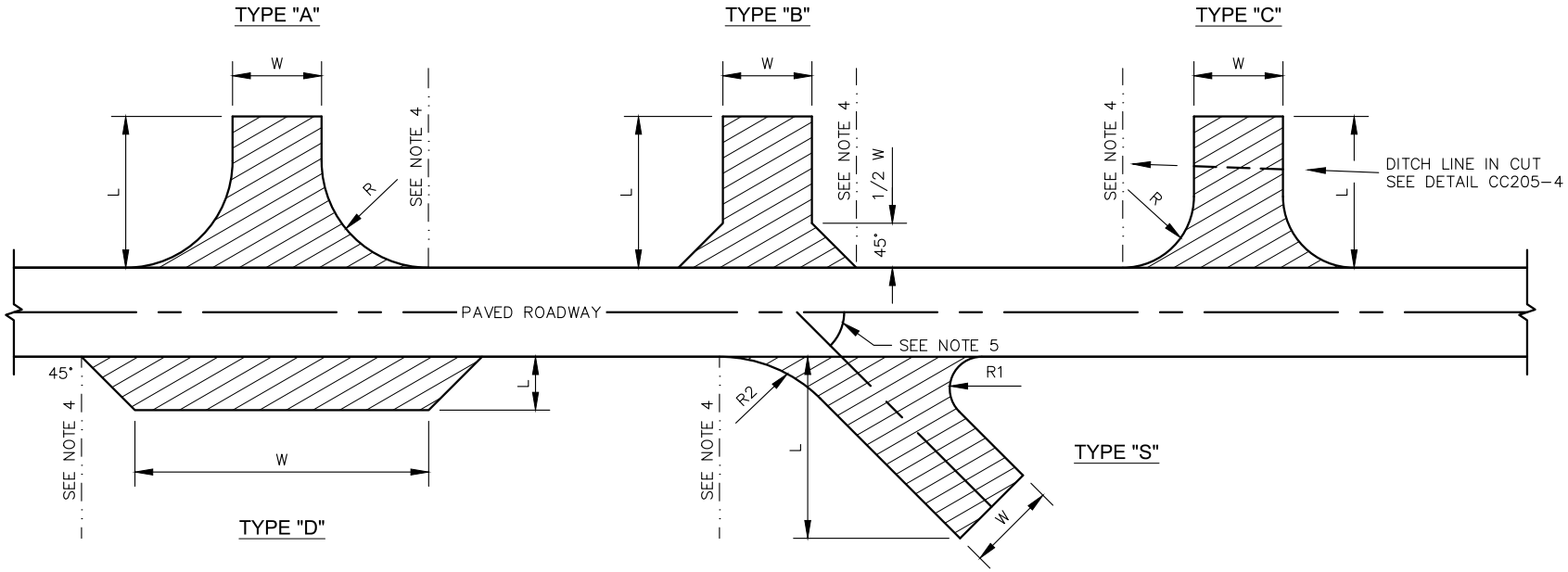


GRAVEL STRUCTURAL SECTION

TOTAL THICKNESS = 2"

RESIDENTIAL		
POSTED SPEED (MPH)	RADIUS (R)	WIDTH (W)*
≤ 35	4'-10'	12'-30'
> 35	25'	12'-30'

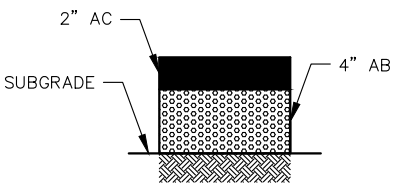
* THE PREFERRED DRIVEWAY WIDTH (W) IS 16'.



COCHISE COUNTY	HIGHWAY & FLOODPLAIN STANDARD DETAIL	RESIDENTIAL DRIVEWAYS	DRAFT 08-22-2017	DETAIL NO. CC205-1

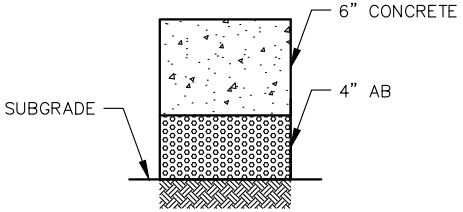
NOTES:

1. DRIVEWAY DETAILS SHALL BE NOTED ON PLANS AS FOLLOWS: DRIVEWAY TYPE, LENGTH, WIDTH, AND RADII.



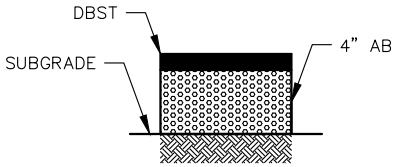
ASPHALT STRUCTURAL SECTION

TOTAL THICKNESS = 6"



CONCRETE STRUCTURAL SECTION

TOTAL THICKNESS = 10"

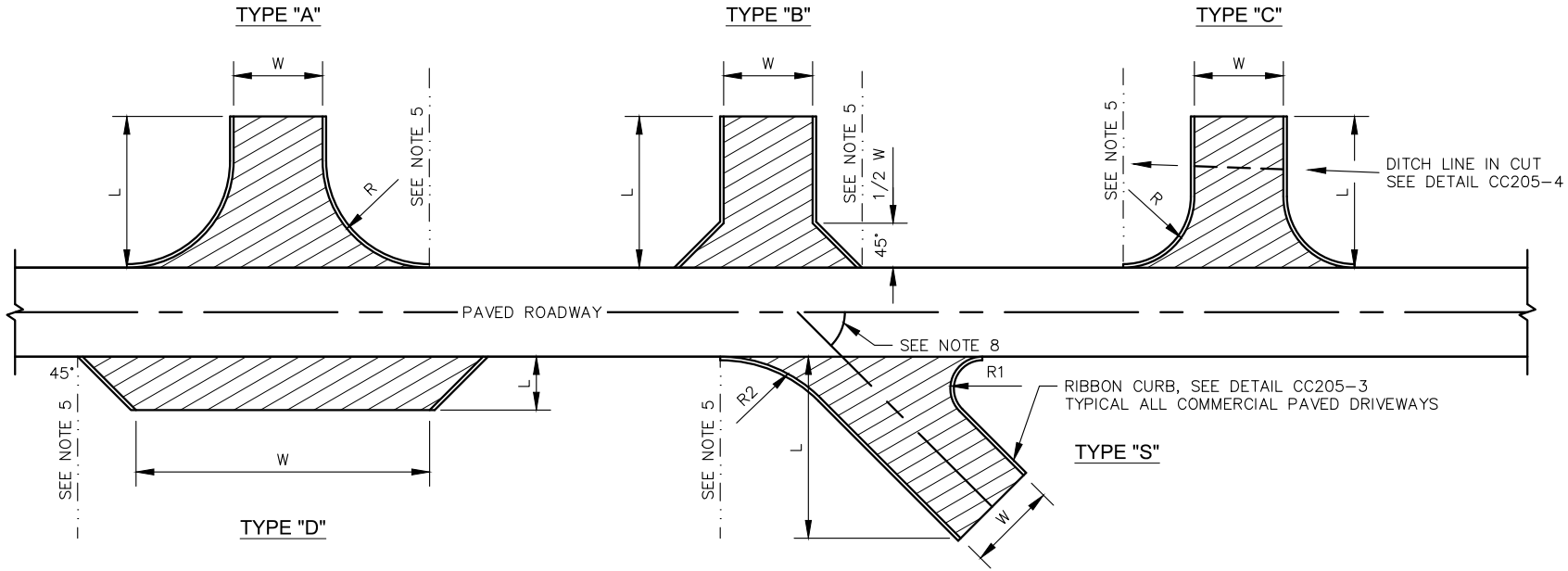


DBST STRUCTURAL SECTION

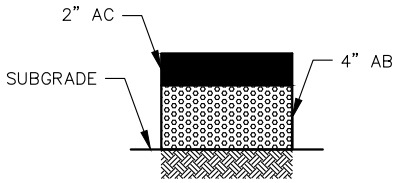
TOTAL THICKNESS = 5" (APPROX.)

NOTES (CONTINUED):

2. COMMERCIAL DRIVEWAYS PROVIDE ACCESS TO AN OFFICE, RETAIL OR INSTITUTIONAL BUILDING OR TO AN APARTMENT BUILDING HAVING MORE THAN FIVE DWELLING UNITS.
3. DRIVEWAYS FOR HIGH VOLUME TRAFFIC GENERATORS SHALL BE APPROVED INDIVIDUALLY BY THE COUNTY ENGINEER OR THEIR REPRESENTATIVE.
4. DRIVEWAYS TO BE PERPENDICULAR TO THE ROADWAY UNLESS OTHERWISE NOTED ON PLANS.
5. DRIVEWAY RADII OR CHAMFERS MUST REMAIN WITHIN THE PROJECTION OF THE SUBJECT PARCEL'S PROPERTY LINES AND SHALL NOT ENCROACH UPON ANY PART OF ADJACENT PROPERTIES' ROADWAY FRONTAGE.
6. FOR COMMERCIAL PAVED DRIVEWAYS THE SURFACE COURSE MUST MATCH, OR BE MORE DURABLE THAN, THE CONNECTING PAVED ROADWAY.
7. COMMERCIAL PAVED DRIVEWAYS SHALL HAVE A MINIMUM WIDTH OF 16', 24' MINIMUM FOR 2-WAY DRIVEWAYS, AND A MAXIMUM WIDTH OF 40'. THE MINIMUM RADIUS TO BE USED IS 35' AND MAXIMUM 50'.
8. TYPE "S" DRIVEWAY SHALL BE AS CLOSE TO 90° AS POSSIBLE AND SHALL BE NO LESS THAN 60° WITHOUT APPROVAL BY THE COUNTY ENGINEER OR THEIR DESIGNATED REPRESENTATIVE.
9. DRAINAGE STRUCTURES SHALL BE PROVIDED UNDER DRIVEWAYS, WHERE NECESSARY.
10. CONSTRUCTION OF CURB, GUTTER, SIDEWALK OR PATHWAY MAY BE REQUIRED AS A CONDITION OF PERMIT APPROVAL. RIBBON CURB IS TYPICALLY DESIRED FOR COMMERCIAL DRIVEWAYS TAKING ACCESS FROM MAJOR OR MINOR COLLECTOR ROADWAYS. SEE RIBBON CURB DETAIL CC205-3.
11. DESIRABLE SIDESLOPES FOR DRIVEWAYS IS 6:1.

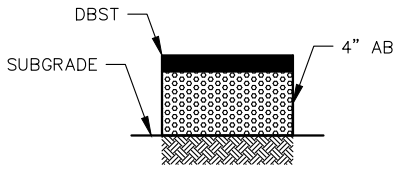


COCHISE COUNTY	HIGHWAY & FLOODPLAIN STANDARD DETAIL	COMMERCIAL DRIVEWAYS	DRAFT 08-22-2017	DETAIL NO. CC205-2



ASPHALT STRUCTURAL SECTION

TOTAL THICKNESS = 6"

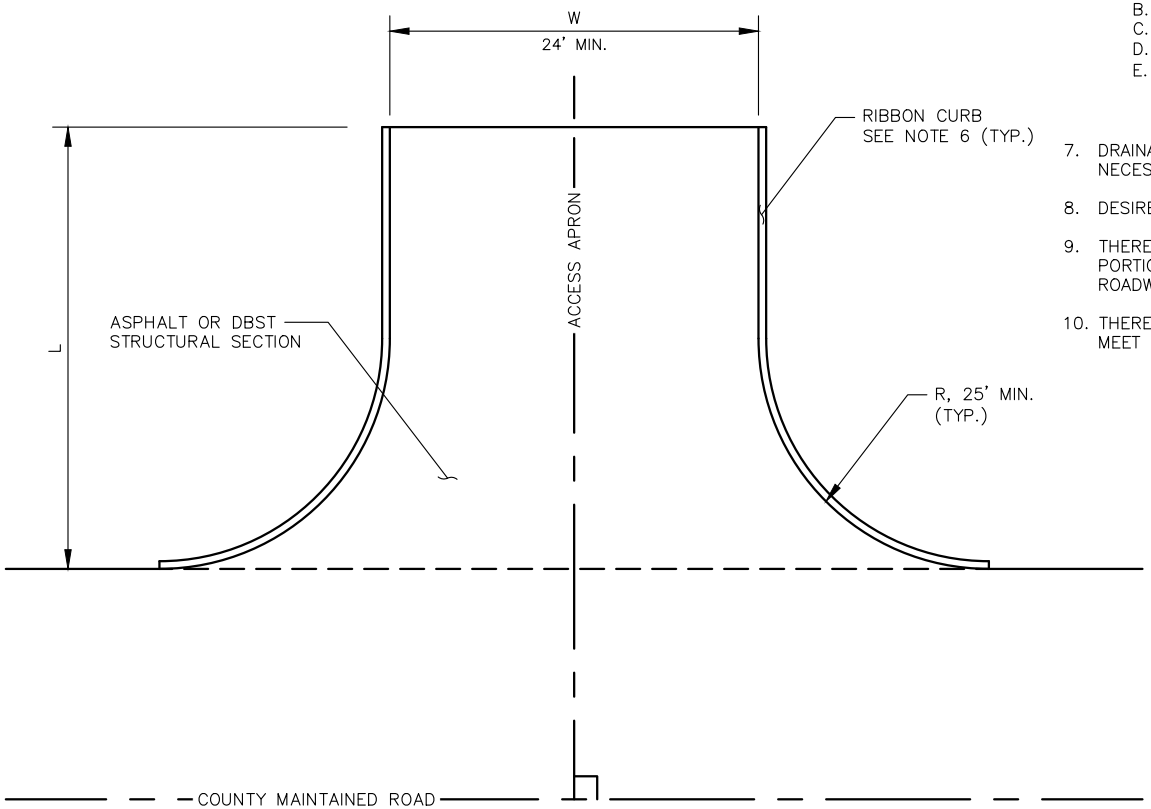


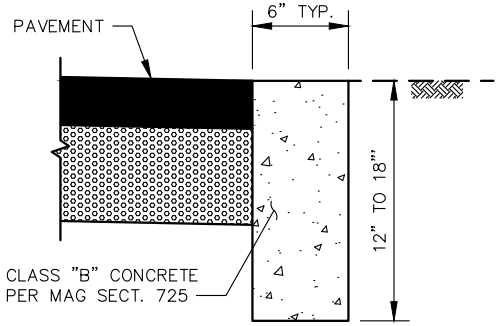
DBST STRUCTURAL SECTION

TOTAL THICKNESS = 5" (APPROX.)

NOTES:

1. ACCESS APRON DETAILS SHALL BE NOTED ON THE PLANS AS FOLLOWS: DRIVEWAY TYPE, LENGTH, WIDTH AND RADII.
2. PRIVATE, LOCAL ROADWAYS CONNECT TWO OR MORE PARCELS TO THE ROADWAY NETWORK.
3. PRIVATE, LOCAL ROADS SHOULD BE ALIGNED WITH ROADWAYS OR DRIVEWAYS TAKING ACCESS FROM THE OTHER SIDE OF THE MAINTAINED ROADWAY, WHEN POSSIBLE.
4. PRIVATE, LOCAL ROADS SHOULD HAVE A PERPENDICULAR CONNECTION, UNLESS OTHERWISE APPROVED BY THE COUNTY ENGINEER.
5. THE PRIVATE ROADWAY ACCESS APRON MUST MATCH, OR BE MORE DURABLE THAN, THE SURFACE OF THE MAINTAINED ROADWAY.
6. RIBBON CURB, PER DETAIL BELOW, SHALL BE PROVIDED FOR CONNECTIONS TO PAVED COUNTY–MAINTAINED ROADWAYS.
   A. VERTICAL SURFACES DOWN FROM 2" BELOW UNDISTURBED SOIL MAY BE PLACED AGAINST NEAT CUT IF APPROVED BY THE ENGINEER AND CONCRETE WILL NOT EXTEND MORE THAN 1" BEYOND THEORETICAL FACE.
   B. ALL EXPOSED SURFACES TO BE STRIPPED GREEN AND TROWEL FINISHED.
   C. CONCRETE CURBS CONFORM TO MAG SECT. 340
   D. MAXIMUM SPACING OF CONTRACTION JOINTS IS 10'
   E. WHEN PAVEMENT AND BASE COURSE EQUALS OR EXCEEDS 10" IN DEPTH, THE ENTIRE ROADWAY SIDE OF THE CURB SHALL BE FORMED. THE TOTAL RIBBON CURB HEIGHT REMAINS 12 TO 18" UNLESS NOTED OTHERWISE.
7. DRAINAGE STRUCTURES, OR AN AT GRADE WATER CROSSING, SHALL BE PROVIDED, WHERE NECESSARY, AND WHEN REQUIRED BY THE COUNTY ENGINEER.
8. DESIRED SIDESLOPES FOR ROADWAY ACCESS APRON IS 6:1.
9. THERE MAY BE A REQUIREMENT TO DEDICATE PUBLIC EASEMENTS OR RIGHT–OF–WAY FOR THOSE PORTIONS OF THE NEW ROADWAY ACCESS APRON CONNECTING TO A COUNTY–MAINTAINED ROADWAY.
10. THERE MAY BE A REQUIREMENT FOR REGULATORY SIGNS OR STREET NAMES SIGNS: THESE MUST MEET THE REQUIREMENTS OF CC134–1 AND 2.





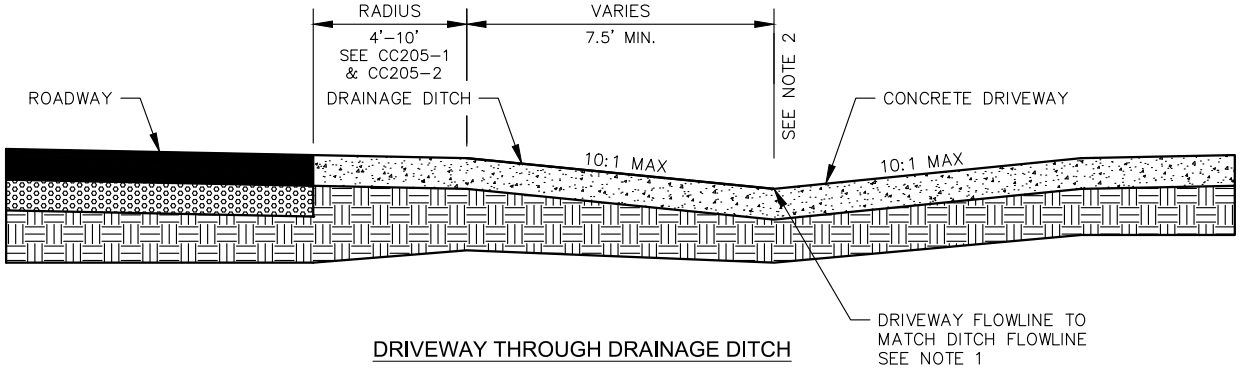
RIBBON CURB

AS SHOWN ON PLANS

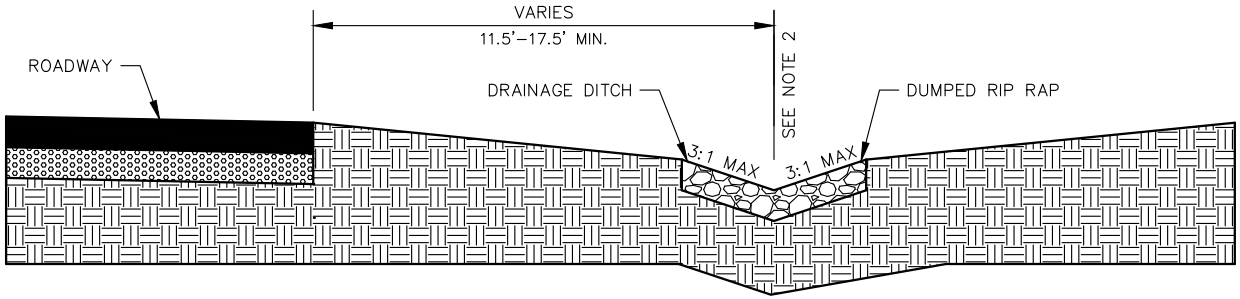
COCHISE COUNTY	HIGHWAY & FLOODPLAIN STANDARD DETAIL	ROADWAY ACCESS APRON	DRAFT 08–22–2017	DETAIL NO. CC205-3

NOTES:

1. TOP OF DRIVEWAY PAVED OR CONCRETE SLAB AND ANY LANDSCAPE MATERIAL SHOULD BE AT GRADE WITH THE DRAINAGE DITCH.
2. DEPTH OF ROADSIDE SWALE AND DITCH SHALL MATCH EXISTING CONDITIONS OF DRAINAGE DITCH WITHOUT ADVERSELY IMPACTING STORMWATER FLOWS.
3. TRANSITION 3:1 RIP RAP SLOPE TO 10:1 PLACED A MINIMUM OF 10' ON EACH SIDE OF THE DRIVEWAY.
4. DEPTH OF DRIVEWAY FLOWLINE IS INTENDED FOR ROADWAY DRAINAGE FOR SHORT DISTANCES. IF OFFSITE FLOWS AND FLOWS FROM PARCELS CONTRIBUTE TO THIS DITCH, THE DESIGN ENGINEER SHALL VERIFY DEPTH NEEDED TO KEEP FLOWS OFF THE ROADWAY.
5. LANDSCAPING (VEGETATION, DECORATIVE ROCK ETC.) SHALL NOT INTERFERE WITH OR IMPEDE DRAINAGE FLOW OR DECREASE THE CROSS-SECTIONAL AREA OF THE CHANNEL OR BE PLACED IN SUCH A MANNER AS TO OBSTRUCT VISIBILITY WITHIN THE CLEAR ZONE, AS DEFINED BY THE SIGHT DISTANCE TRIANGLE, SEE DETAIL CC300.

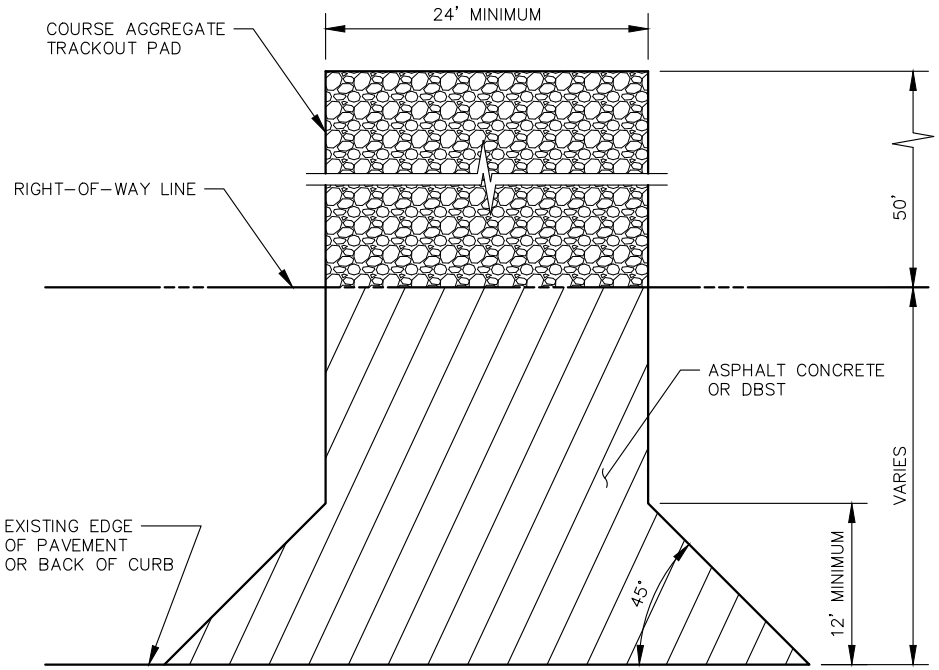


DRIVEWAY THROUGH DRAINAGE DITCH



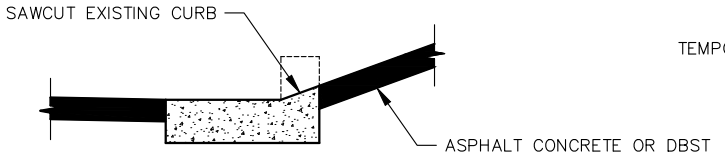
RIP RAP MATERIAL IN DRAINAGE DITCH

COCHISE COUNTY	HIGHWAY & FLOODPLAIN STANDARD DETAIL	DRIVEWAY & LANDSCAPING WITHIN DRAINAGE DITCH	DRAFT 08–22–2017	DETAIL NO. CC205-4

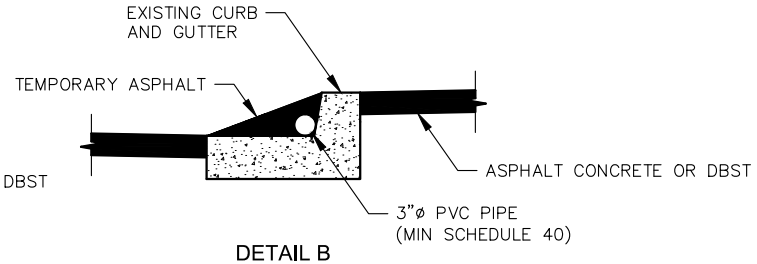


NOTES:

1. TEMPORARY SITE ACCESS WITHIN RIGHT-OF-WAY SHALL BE PAVED, MINIMUM STRUCTURAL SECTION SHALL MATCH OR BE MORE DURABLE THAN THE SURFACE OF THE CONNECTING ROADWAY.
2. SIDEWALKS, PATHWAYS AND TRAILS THAT CROSS THE TEMPORARY ACCESS ALIGNMENT SHALL BE MAINTAINED BY THE CONTRACTOR. RELOCATION OF THE FACILITIES REQUIRES COUNTY APPROVAL.
3. TEMPORARY SITE ACCESS SHALL NOT ALTER OR IMPEDE EXISTING DRAINAGE.
4. THE MINIMUM REQUIRED CLEAR DISTANCE FROM AN INTERSECTION IS 50 FEET.
5. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING TRACKOUT AND DUST CONTROL.
6. CONTRACTOR SHALL SWEEP ROADWAY AS NECESSARY.
7. CONTRACTOR IS RESPONSIBLE FOR RESTORING RIGHT-OF-WAY TO ORIGINAL CONDITION. THIS INCLUDES ROADWAY, SIDEWALK, PATHWAYS, TRAILS, AND LANDSCAPING.
8. CONTRACTOR IS RESPONSIBLE FOR OBTAINING AN APPROVED TRAFFIC CONTROL PLAN.
9. TEMPORARY SITE ACCESS SHALL BE REMOVED WHEN NO LONGER REQUIRED.



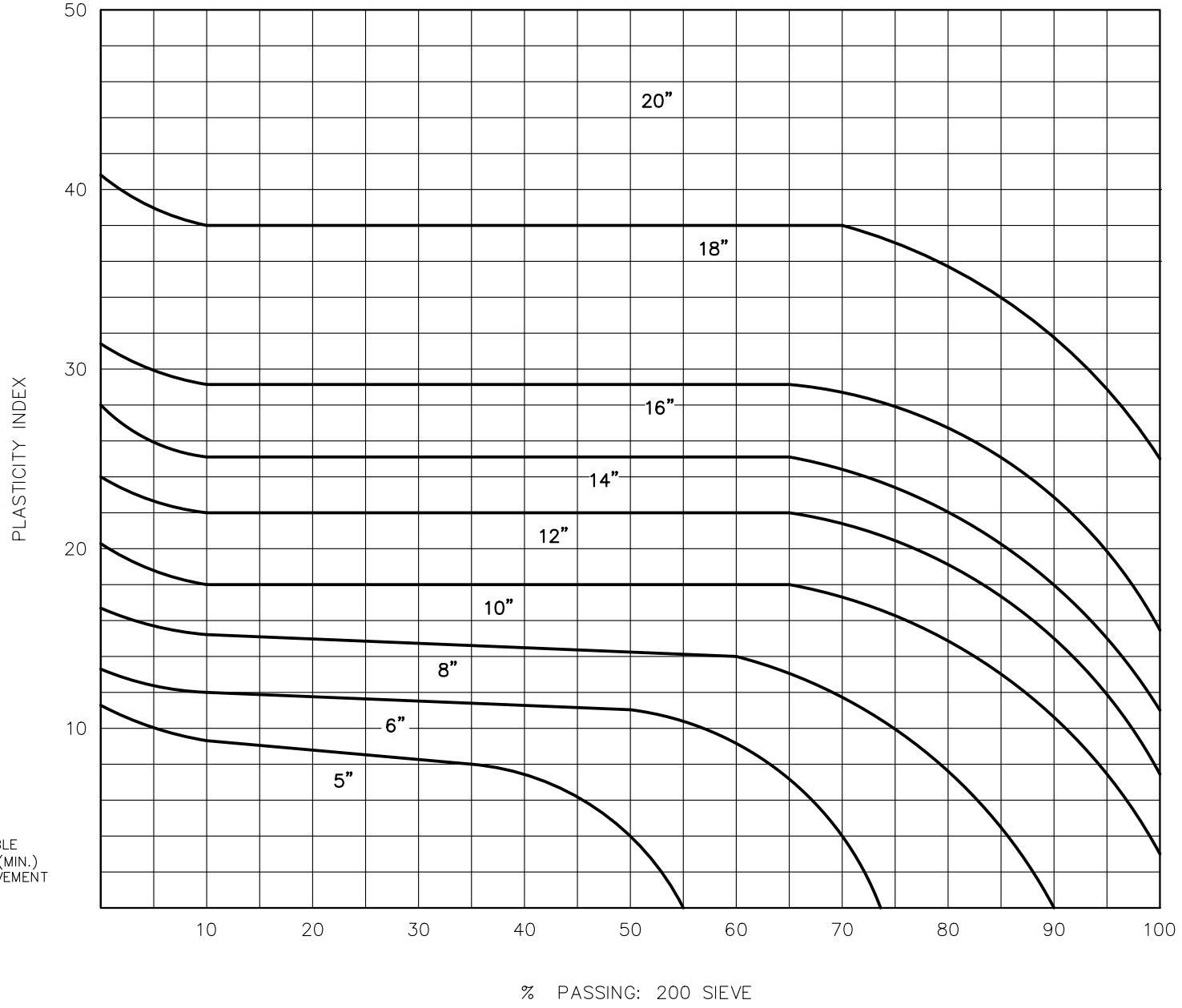
DETAIL A



DETAIL B

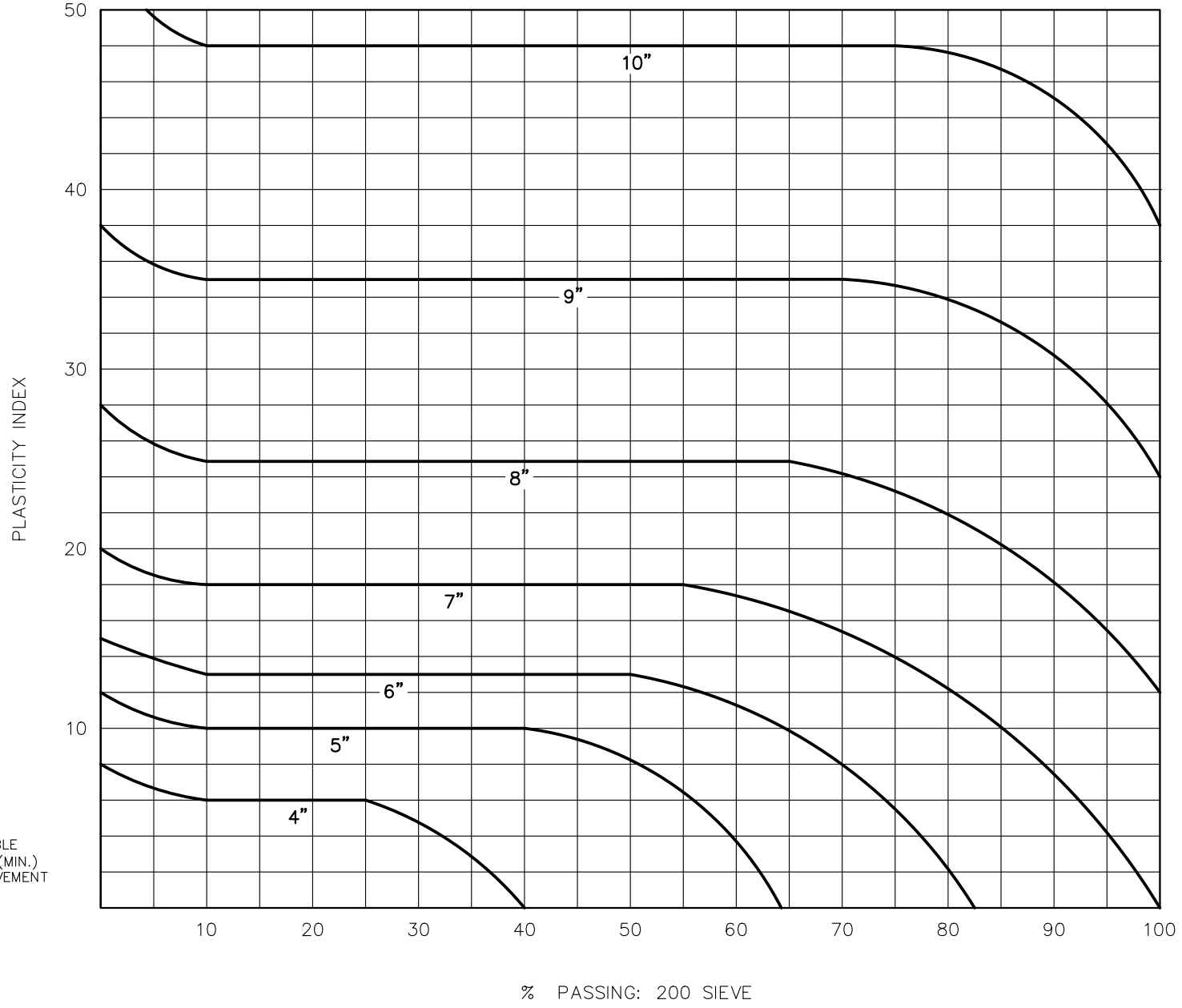
ALTERNATIVE SECTIONS FOR LOCATIONS WITH CURB & GUTTER

COCHISE COUNTY	HIGHWAY & FLOODPLAIN STANDARD DETAIL	TEMPORARY SITE ACCESS WITH TRACKOUT PAD	DRAFT 08-22-2017	DETAIL NO. CC207



MINIMUM DEPTH OF FLEXIBLE BASE COURSE UNDER 3" (MIN.) ASPHALTIC CONCRETE PAVEMENT

COCHISE COUNTY	HIGHWAY & FLOODPLAIN STANDARD DETAIL	DEPTH OF BASE COURSE ARTERIAL & COLLECTOR ROADS	DRAFT 08-22-2017	DETAIL NO. CC208-1

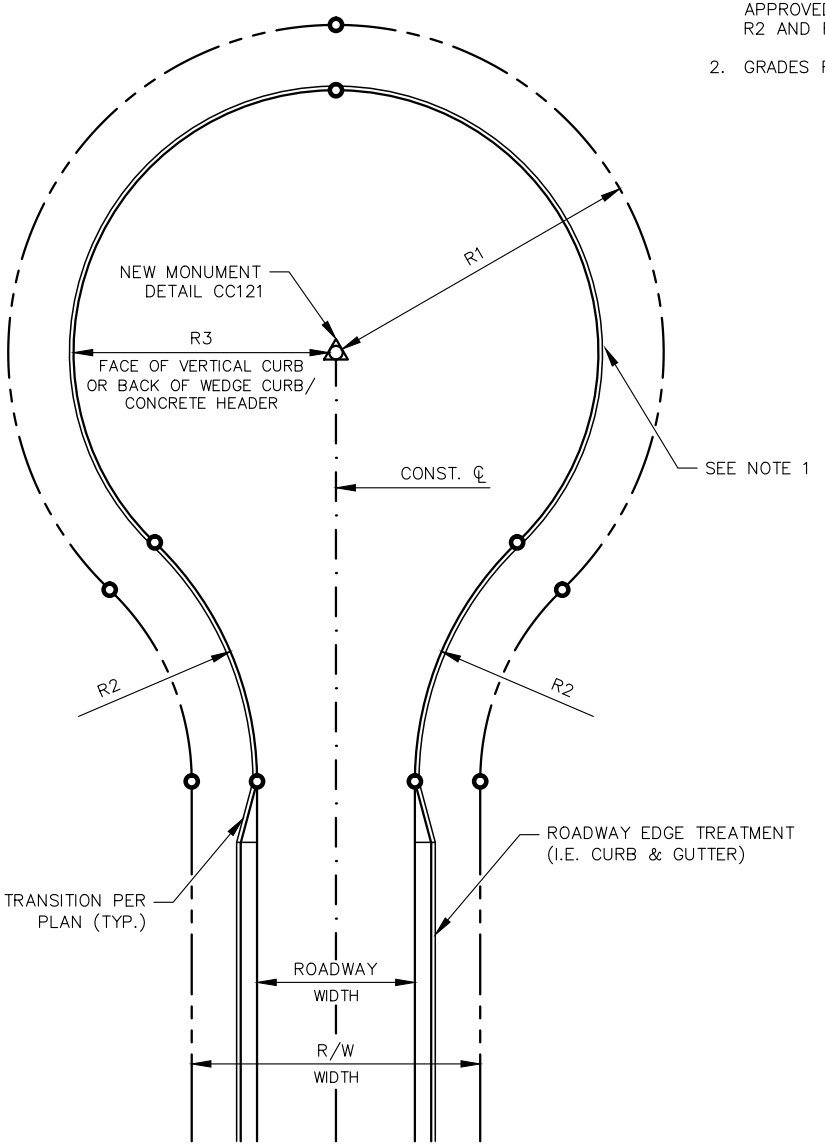


MINIMUM DEPTH OF FLEXIBLE BASE COURSE UNDER 2" (MIN.) ASPHALTIC CONCRETE PAVEMENT OR DOUBLE BITUMINOUS SURFACE TREATMENT

COCHISE COUNTY	HIGHWAY & FLOODPLAIN STANDARD DETAIL	DEPTH OF BASE COURSE LOCAL STREETS	DRAFT 08-22-2017	DETAIL NO. CC208-2

NOTES:

1. CUL–DE–SAC EDGE TREATMENT SHALL BE CONSTRUCTED PER APPROVED DESIGN PLANS OR AS CONCRETE RIBBON CURB ON R2 AND R3, SEE DETAIL CC205–3.
2. GRADES REQUIRED AT ⊙

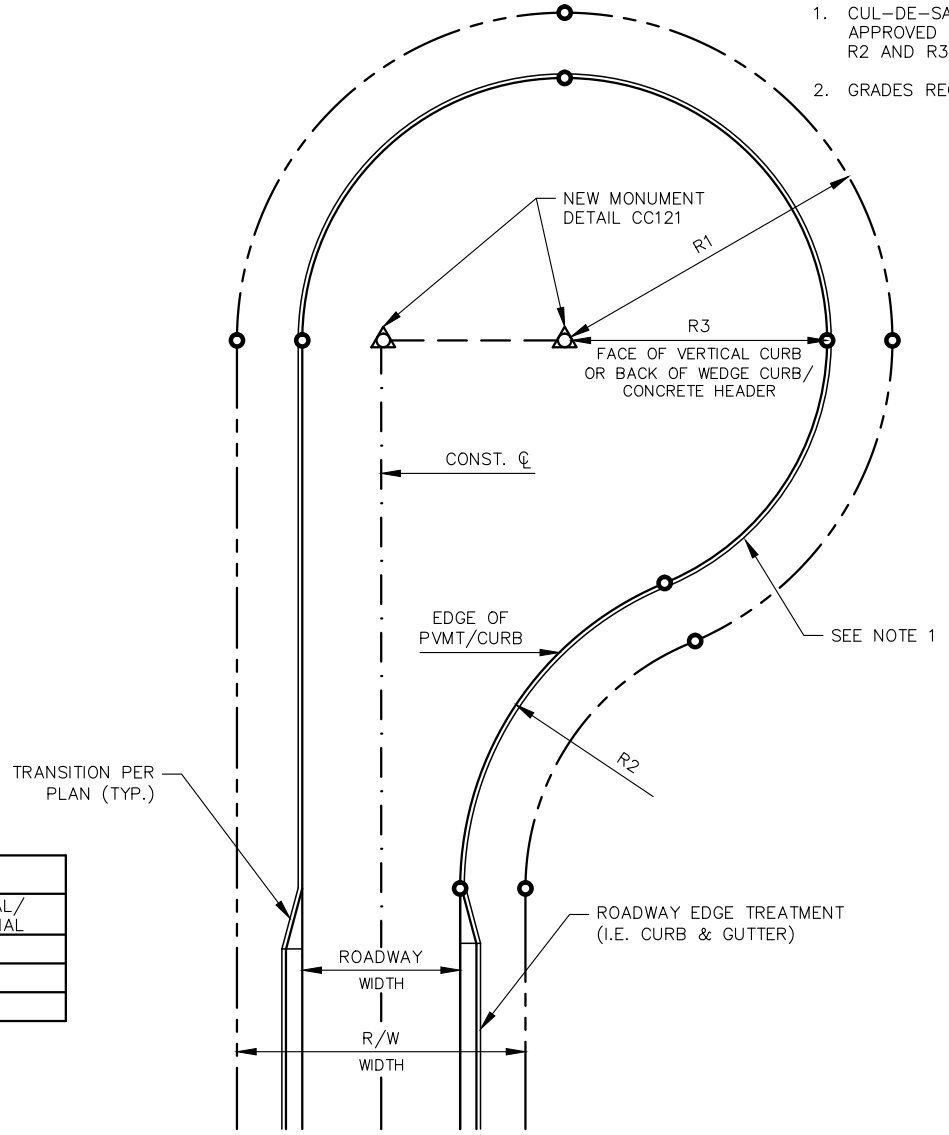


MINIMUM RADII IN FEET		
	RESIDENTIAL	INDUSTRIAL/ COMMERCIAL
R1	50'	60'
R2	50'	60'
R3	42'	52'

COCHISE COUNTY	HIGHWAY & FLOODPLAIN STANDARD DETAIL	STANDARD CUL-DE-SAC	DRAFT 08–22–2017	DETAIL NO. CC209-1

NOTES:

1. CUL-DE-SAC EDGE TREATMENT SHALL BE CONSTRUCTED PER APPROVED DESIGN PLANS OR AS CONCRETE RIBBON CURB ON R2 AND R3, SEE DETAIL CC205-3.
2. GRADES REQUIRED AT ⊙

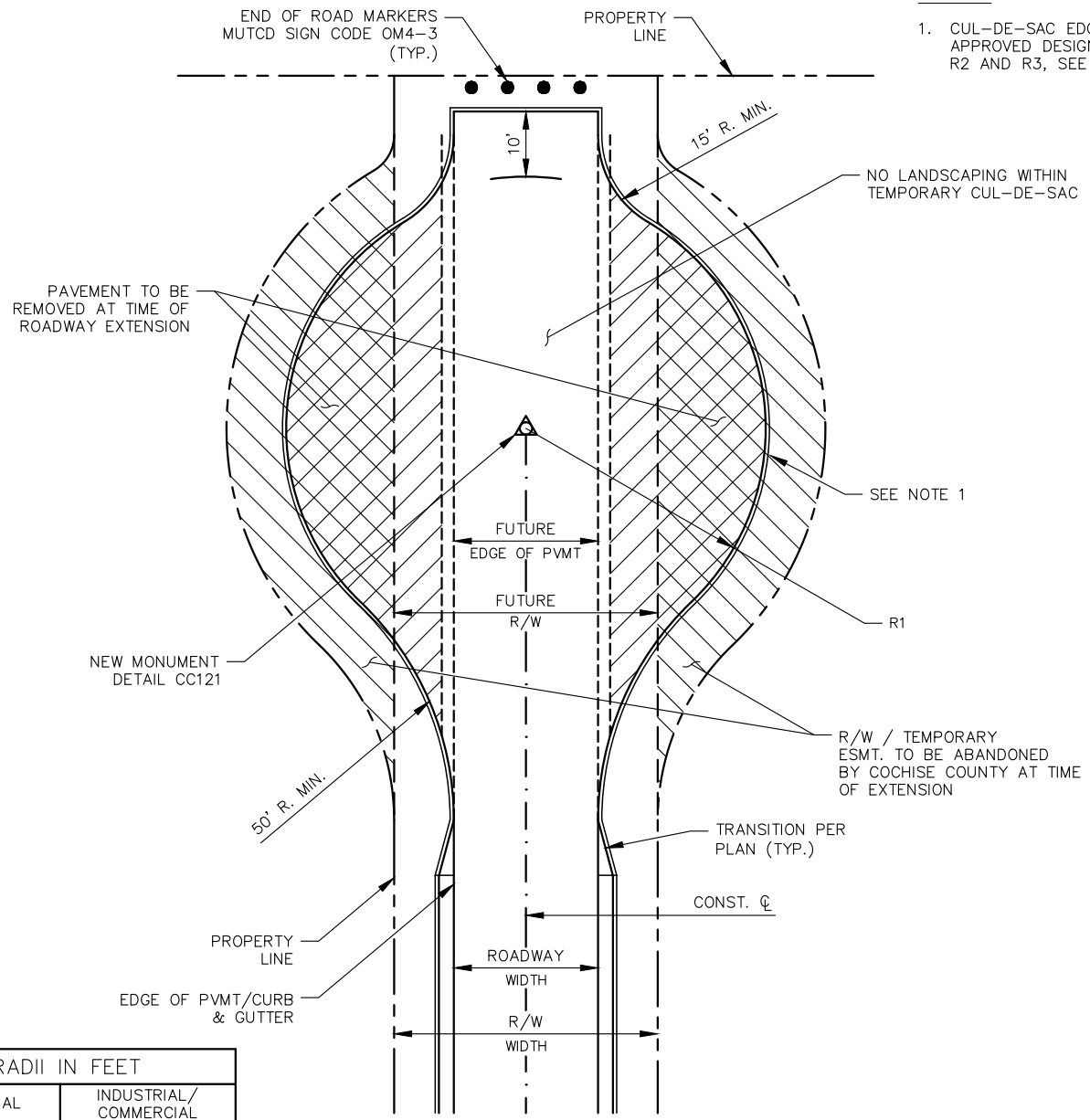


MINIMUM RADII IN FEET		
	RESIDENTIAL	INDUSTRIAL/ COMMERCIAL
R1	50'	60'
R2	50'	60'
R3	42'	52'

COCHISE COUNTY	HIGHWAY & FLOODPLAIN STANDARD DETAIL	OFFSET CUL-DE-SAC	DRAFT 08-22-2017	DETAIL NO. CC209-2

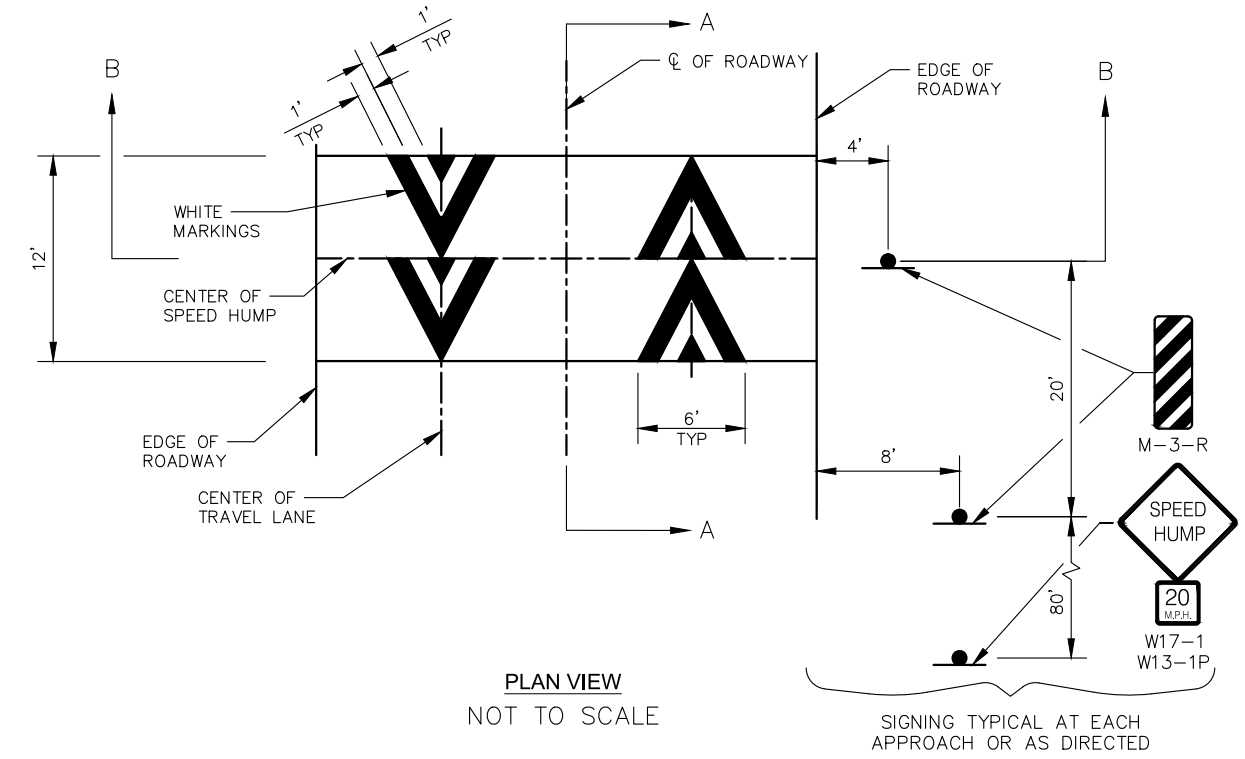
NOTES:

1. CUL-DE-SAC EDGE TREATMENT SHALL BE CONSTRUCTED PER APPROVED DESIGN PLANS OR AS CONCRETE RIBBON CURB ON R2 AND R3, SEE DETAIL CC205-3.



MINIMUM RADII IN FEET		
	RESIDENTIAL	INDUSTRIAL/ COMMERCIAL
R1	42'	52'

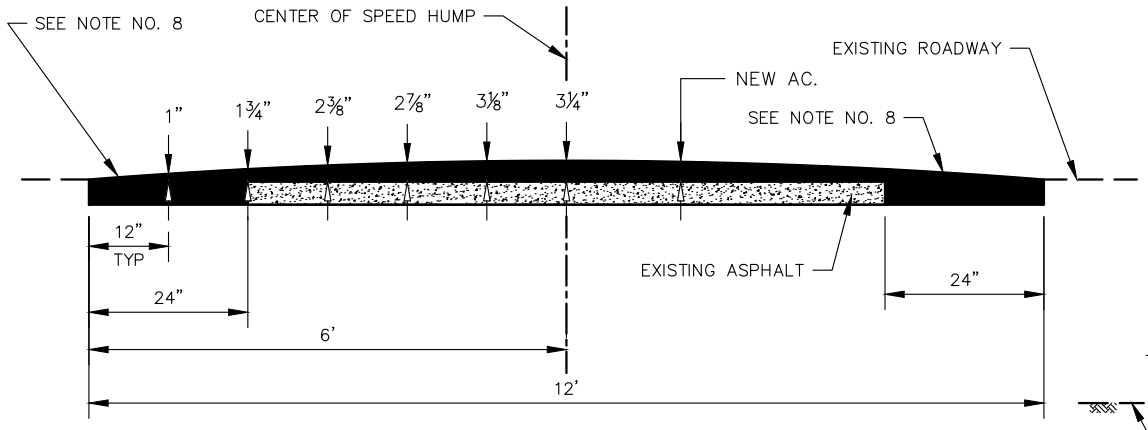
COCHISE COUNTY	HIGHWAY & FLOODPLAIN STANDARD DETAIL	TEMPORARY CUL-DE-SAC	DRAFT 08-22-2017	DETAIL NO. CC209-3



PLAN VIEW

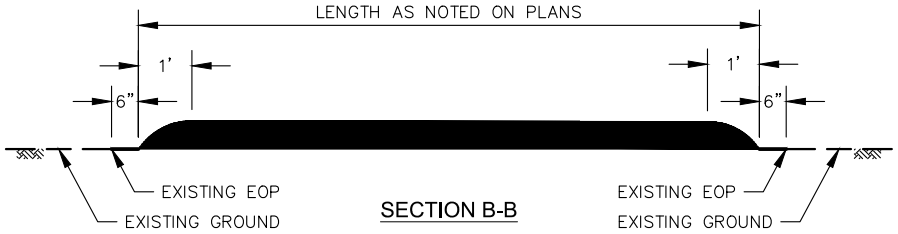
NOT TO SCALE

SIGNING TYPICAL AT EACH APPROACH OR AS DIRECTED



SECTION A-A

NOT TO SCALE



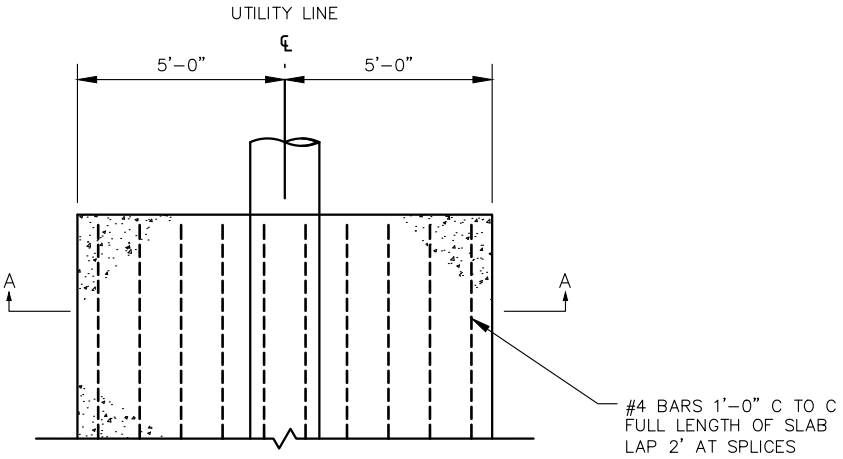
SECTION B-B

NOT TO SCALE

NOTES:

1. SECTION A–A FINISHED SURFACE DIMENSIONS ARE DISTANCES FROM THE SURFACE OF THE EXISTING ROADWAY. THE CONSTRUCTION TOLERANCE FOR THESE CROSS SECTION DIMENSIONS IS ± 0.25 INCHES.
2. SPEED HUMP THAT DO NOT COMPLY WITH CONSTRUCTION TOLERANCES SHALL BE REMOVED AND REPLACED AT CONTRACTOR'S EXPENSE.
3. SPEED HUMP SHALL NOT BE INSTALLED IN A LOCATION SUCH THAT DRAINAGE IS COMPROMISED.
4. SPEED HUMP SHALL NOT BE PLACED OVER MANHOLES, VALVE BOXES, SURVEY MONUMENTS, ETC. OR AT DRIVEWAYS.
5. SPEED HUMP SHALL ONLY BE PLACED AT LOCATIONS APPROVED BY COCHISE COUNTY.
6. SPEED HUMP SHALL BE CONSTRUCTED WITH ASPHALT MIX APPROVED BY THE AGENCY. COMPACTION SHALL BE PER SECTION 321. TACK COAT PER SECTION 713 SHALL BE APPLIED PRIOR TO PAVING.
7. STRIPING WILL BE (2) COATS OF WHITE PAINT WITH GLASS BEADS.
8. TRANSVERSE EDGE JOINTS (ACROSS ROADWAY)
   A. FOR EXISTING ASPHALT PAVEMENTS EQUAL TO OR GREATER THAN 2 INCHES IN THICKNESS: SAWCUT AND REMOVE A 24 INCH WIDTH AT THE MATCHING SPEED HUMP EDGE. REPLACE THE FULL DEPTH OF REMOVED ASPHALT WITH SPEED HUMP ASPHALT AS A SINGLE OPERATION DURING CONSTRUCTION OF THE SPEED HUMP.
   B. FOR EXISTING ASPHALT PAVEMENTS LESS THAN 2 INCHES IN THICKNESS: REMOVE PAVEMENT AND SUBGRADE TO A MINIMUM DEPTH OF 2 INCHES. INSTALL A NEW ASPHALT BASE PAD FOR THE SPEED HUMP.
9. IF A SERIES OF SPEED HUMPS EXIST IN CLOSE PROXIMITY, AN ADVISORY SPEED PLAQUE AND SPEED HUMP SIGN MAY BE ELIMINATED ON ALL BUT THE FIRST SPEED HUMP IN THE SERIES.
10. SPEED LIMIT AT SPEED HUMP(S) WILL BE SIGNED FOR 15 MPH IN SCHOOL ZONES AND 20 MPH ON RESIDENTIAL STREETS.
11. THE STREET IS NOT A TRUCK ROUTE, OR PRILIMINARY/ROUTINE ACCESS FOR EMERGENCY VEHICLES.

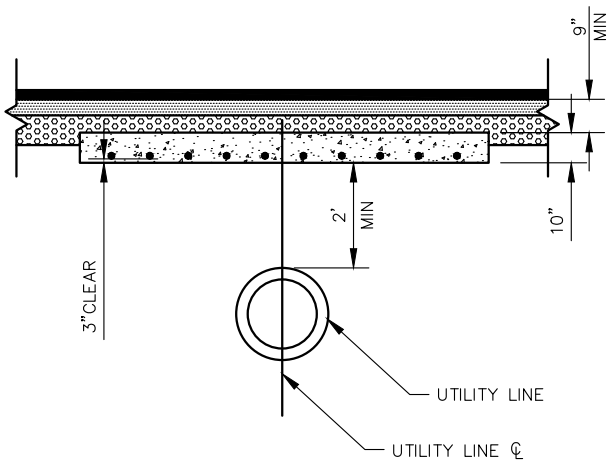
COCHISE COUNTY	HIGHWAY & FLOODPLAIN STANDARD DETAIL	RESIDENTIAL SPEED HUMP WITHOUT CURB AND GUTTER	DRAFT 08-22-2017	DETAIL NO. CC210



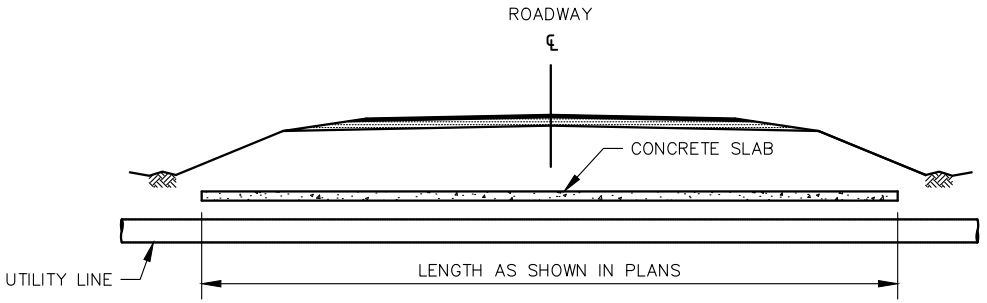
NOTES:

1. ALL CONCRETE SHALL BE CLASS 'B' AS PER MAG SECT. 505 AND 725.

FOR SINGLE INSTALLATION	
QUANTITIES PER FT OF SLAB LENGTH	
CONCRETE	REINFORCING STEEL
0.31 CY	6.68 LBS

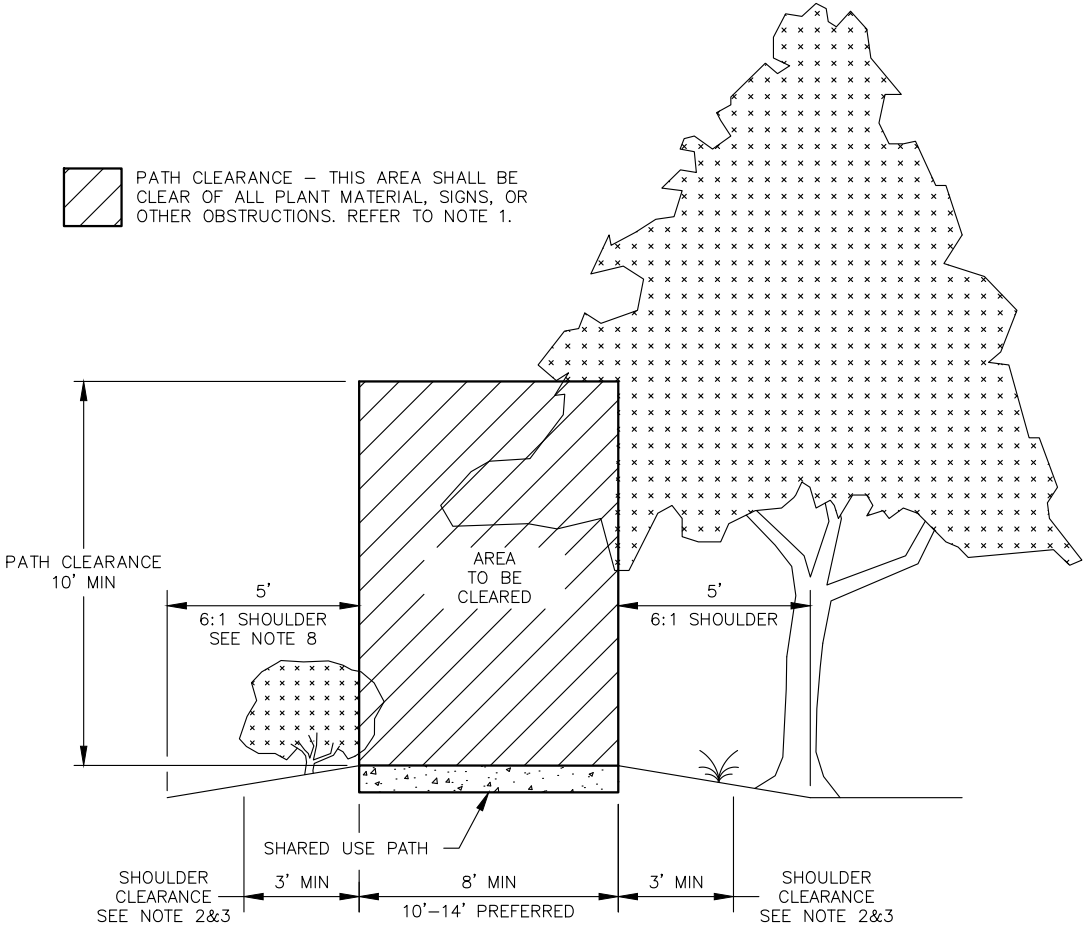


SECTION A-A



CROSS SECTION

COCHISE COUNTY	HIGHWAY & FLOODPLAIN STANDARD DETAIL	UTILITY LINE PROTECTIVE CONCRETE SLAB	DRAFT 08–22–2017	DETAIL NO. CC213

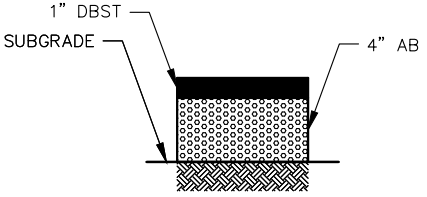


NOTES:

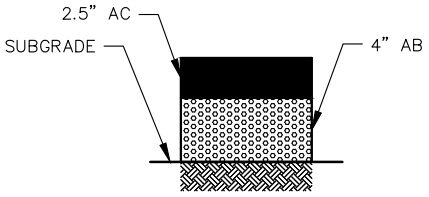
1. TREE/SHRUBS/PLANTS SHALL BE TRIMMED TO NEAREST INTERSECTING BRANCH.
2. NO TREES OR SHRUBS WITH A TRUNK DIAMETER 4 INCHES OR GREATER SHALL REMAIN WITHIN THE 3 FOOT MINIMUM SHOULDER CLEARANCE AREA.
3. ALL ORGANIC MATERIAL SHALL BE REMOVED WITHIN THE SHOULDER CLEARING LIMITS FOR NECESSARY GRADING TO A DEPTH OF SIX INCHES AND HAULED FROM THE SITE PRIOR TO GRADING.
4. COMPACTION OF ALL AREAS SHALL BE TO THE PERCENT SHOWN ON THE PLANS OF THE MAXIMUM DENSITY AS DETERMINED B A.S.T.M. D698. NATIVE SUBGRADE IS TO BE SCARIFIED TO A DEPTH OF SIX INCHES, BROUGHT TO THE PROPER MOISTURE CONTENT AND COMPACTED TO THE REQUIRED 95% DENSITY. THE SOURCE OF FILL MATERIAL SHALL BE APPROVED BY THE COUNTY ENGINEER PRIOR TO COMMENCEMENT OF WORK.
5. AGGREGATE BASE COURSE SHALL CONFORM TO MAG 310, AS AMENDED BY COCHISE COUNTY:
   310.1 DESCRIPTION:
   AGGREGATE BASE SHALL CONFORM TO MAG UNIFORM SPECIFICATION SECTION 702 WITH THE EXCEPTION THAT THE GRADATION OF SIEVE SIZE NO. 200 SHALL BE FROM 5% TO 15% WITH A PLASTICITY INDEX FROM 3% TO 6%.
6. DOUBLE CHIP SEAL SHALL CONFORM TO MAG SECTION 330, AS AMENDED BY COCHISE COUNTY:
   330.2.1 ASPHALT:
   THE TYPE OF BITUMINOUS MATERIAL SHALL BE CRS–2, CRS–2P, OR PASS. APPLICATION SHALL BE AT THE RATE OF 0.40 TO 0.45 GALLONS PER SQUARE YARD UNLESS OTHERWISE SPECIFIED BY THE COUNTY ENGINEER.

   330.2.2 AGGREGATE
   THE STONE CHIPS SHALL FULLY COMPLY WITH SECTION 716 EXCEPT PRE–COATING IS NOT REQUIRED. THE FIRST LAYER OF CHIPS SHALL COMPLY WITH TABLE 716–2 AND THE SECOND LAYER OF CHIPS SHALL COMPLY WITH TABLE 716–1. THE CHIPS SHALL BE CLEAN. APPLICATION SHALL BE AT THE RATE OF APPROXIMATELY 20 POUNDS PER SQUARE YARD FOR FIRST LAYER AND 26 POUNDS PER SQUARE YARD FOR THE SECOND LAYER.

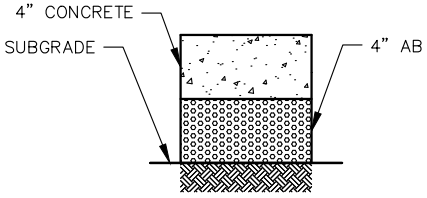
   IF MOIST CHIPS ARE USED, THE TOTAL MOISTURE CONTENT SHALL NOT EXCEED 1.5%.
7. FOR PATHWAY SIGNAGE REFER TO THE CURRENT VERSION OF THE MANUAL FOR UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) PART 9: TRAFFIC CONTROL FOR BICYCLE FACILITIES.
8. THE MINIMUM RECOMMENDED DISTANCE BETWEEN A PATH AND THE ROADWAY FACE OF CURB OR EDGE OF TRAVELED WAY (WHERE THERE IS NO CURB) IS 5 FEET (1.5 M). WHERE A SHOULDER IS PRESENT, THE SEPARATION DISTANCE BEGINS AT THE OUTSIDE EDGE OF THE SHOULDER.
9. PATHWAY DESIGN SHALL COMPLY WITH ADA ACCESSIBILITY REQUIREMENTS OF A MAXIMUM 2% CROSS–SLOPE AND CURB RAMPS PER ADA ACCESSIBILITY GUIDELINES. REFER TO CURRENT ADA STANDARDS AT WWW.ADA.GOV AND WWW.ACCESS–BOARD.GOV.



PATH STRUCTURAL SECTION #1
TOTAL THICKNESS = 5"

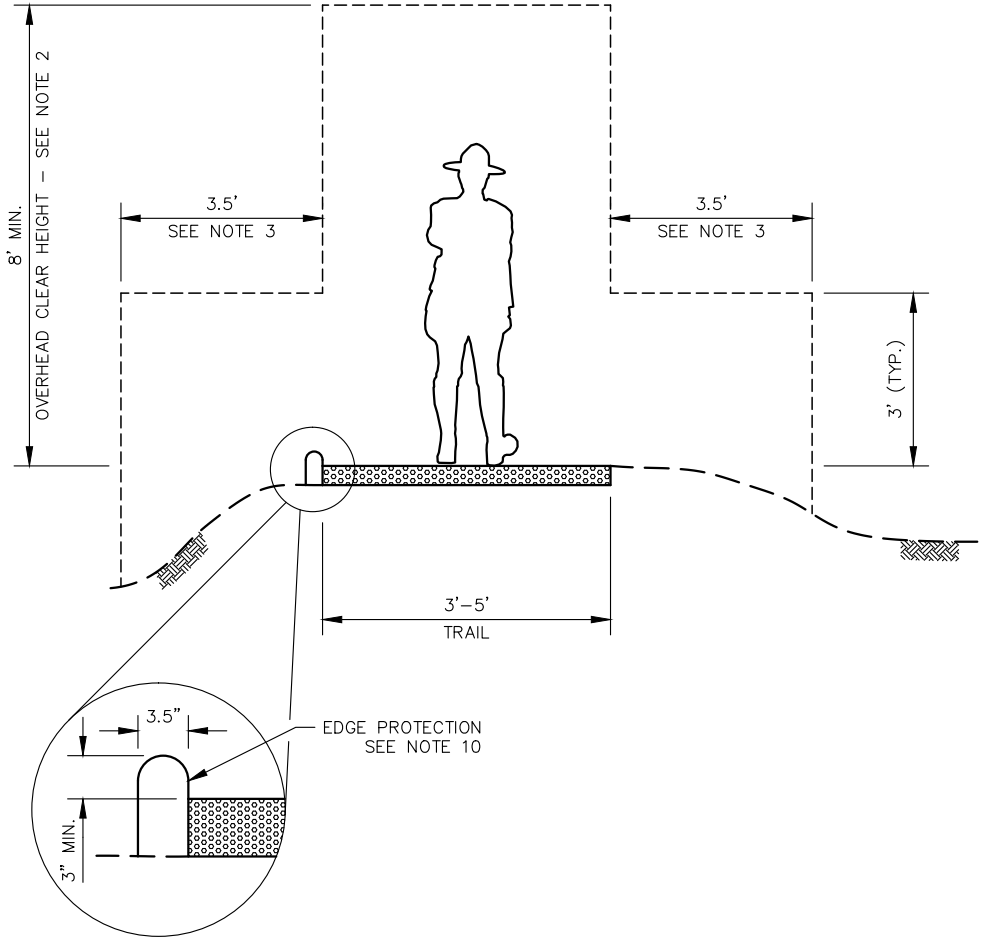


PATH STRUCTURAL SECTION #2
TOTAL THICKNESS = 6.5"



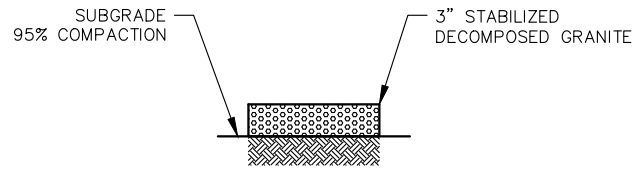
PATH STRUCTURAL SECTION #3
TOTAL THICKNESS = 8"

COCHISE COUNTY	HIGHWAY & FLOODPLAIN STANDARD DETAIL	TYPICAL SHARED USE PATH	DRAFT 08–22–2017	DETAIL NO. CC232



NOTES:

1. PATHWAY WIDTH IS 3' MINIMUM, 5' PREFERRED, AND 8' MAXIMUM.
2. AN OVERHEAD CLEAR HEIGHT SHOULD BE PROVIDED OF A MINIMUM OF 8', 10' PREFERRED. FOR RECREATIONAL TRAILS WITH EQUESTRIAN ACTIVITY OVERHEAD CLEAR HEIGHT SHOULD BE INCREASED TO 10' MINIMUM, 12' PREFERRED.
3. NO VEGETATION OR OBSTACLES WITHIN A 3' HIGH BY 3.5' WIDE SPACE EACH SIDE. OFFSET SHOULD BE 3' MINIMUM TO SIGNS, BENCHES OR ANY OTHER VERTICAL ELEMENT.
4. MINIMUM 10' CLEARANCE BETWEEN TRAIL EDGE AND NEWLY PLANTED THORNY PLANTS. ALIGN TRAIL TO AVOID EXISTING THORNY PLANTS WHEREVER POSSIBLE TO MINIMIZE THEIR REMOVAL.
5. CARE SHOULD BE GIVEN DURING TRAIL CONSTRUCTION TO PRESERVE EXISTING VEGETATION IN PLACE.
6. PASSING SPACES OF AN ADDITIONAL 5' WIDE BY 5' LONG IN NATURAL OPENINGS IN THE LANDSCAPE SHOULD BE PROVIDED AT A MINIMUM EVERY 1,000 FEET, AS ALLOWED BY TERRAIN.
7. STRIVE TO MAINTAIN 6' BETWEEN TRAIL EDGE AND TREE TRUNK. CUT TREES AND SHRUBS BACK TO THE TRUNK. TO CREATE MORE VISUAL INTEREST, AVOID CUTTING ALL VEGETATION BACK THE SAME OFFSET DISTANCE ALONG THE CORRIDOR.
8. RECREATIONAL TRAILS DESIGNED PRIMARILY FOR PEDESTRIAN ACTIVITY SHOULD MEET THE SLOPE AND SLIP RESISTANT CRITERIA OF THE ACCESSIBILITY GUIDELINES FOR OUTDOOR DEVELOPED AREAS (U.S. ACCESS BOARD).
9. FOR RECREATIONAL TRAIL SIGNAGE REFER TO THE CURRENT VERSION OF THE MANUAL FOR UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AND FHWA RECREATION TRAIL MANUAL, CHAPTER 15.
10. EDGE PROTECTION SHOULD BE INSTALLED AT LOCATIONS WITH DROP OFFS OR HAZARDOUS SITUATIONS, MINIMUM 3" HIGH. IF BICYCLISTS WILL BE USERS OF THE TRAIL, THE EDGE PROTECTION SHOULD BE A MINIMUM OF 42" HIGH. ROCKS, SHRUBS AND/OR MAN MADE BARRIERS CAN BE USED AS EDGE PROTECTION.



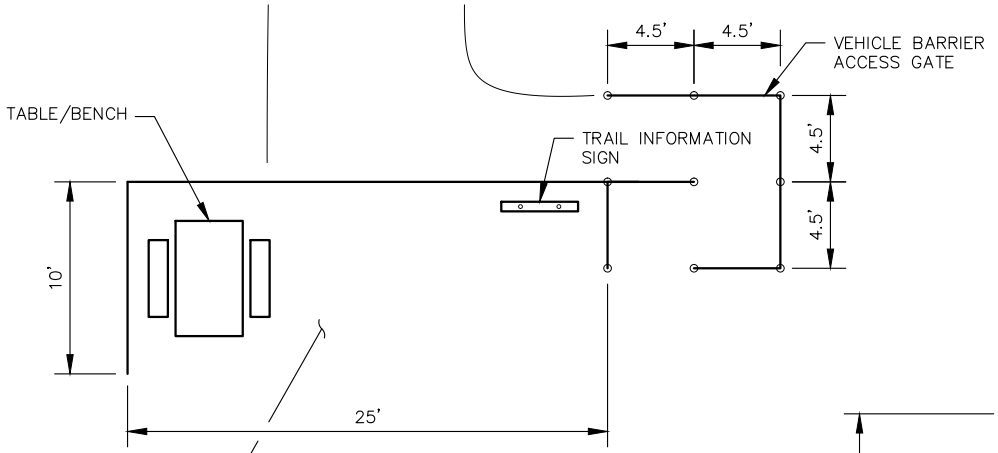
TRAIL STRUCTURAL SECTION

TOTAL THICKNESS = 3"

COCHISE COUNTY	HIGHWAY & FLOODPLAIN STANDARD DETAIL	TYPICAL RECREATIONAL TRAIL	DRAFT 08–22–2017	DETAIL NO. CC233-1

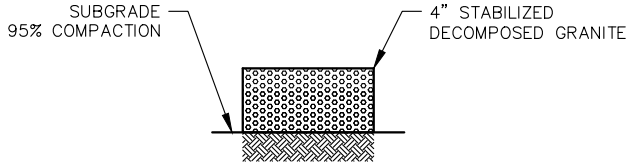
NOTE:

1. RIBBON CURB IS REQUIRED IF CONNECTION ROADWAY IS ASPHALT OR DBST.



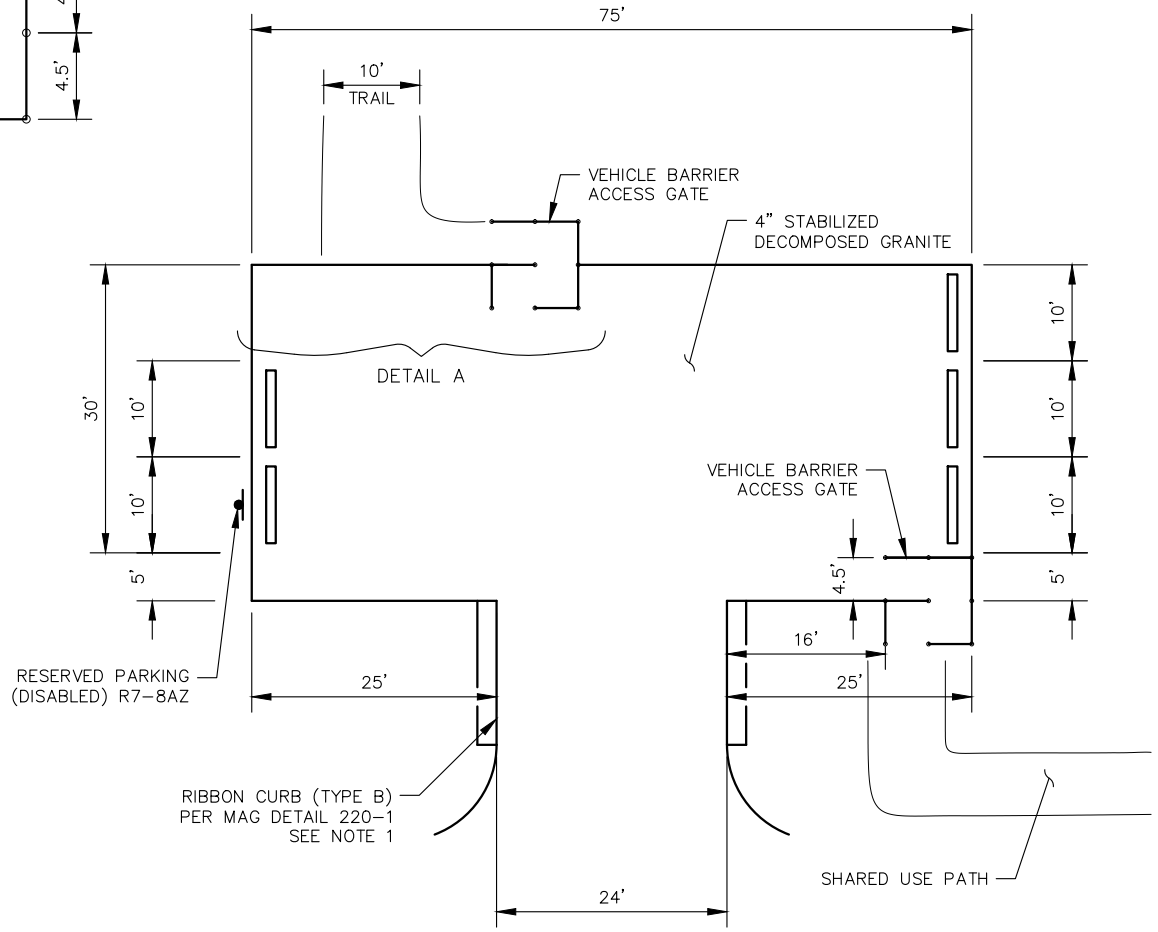
DETAIL A

TRAILHEAD



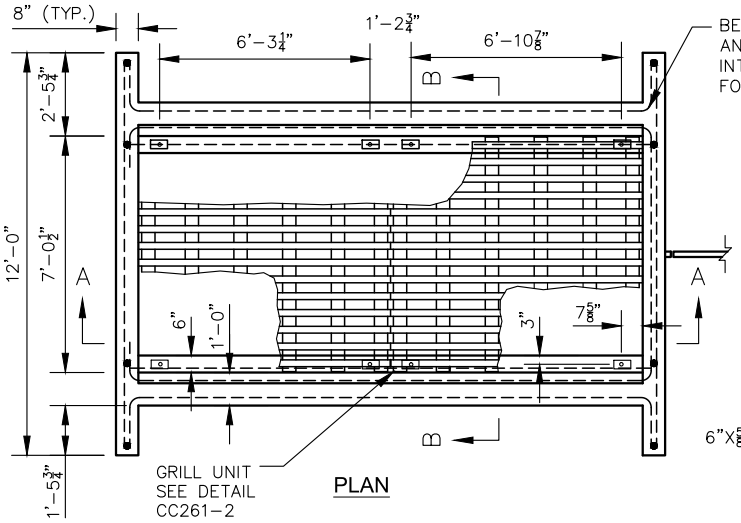
PARKING LOT STRUCTURAL SECTION

TOTAL THICKNESS = 4"

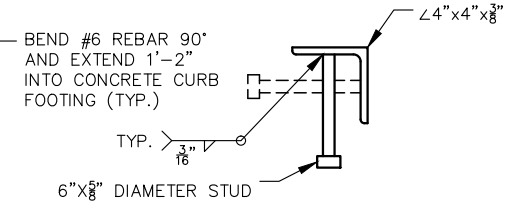


TRAILHEAD AND TRAIL PARKING AREA

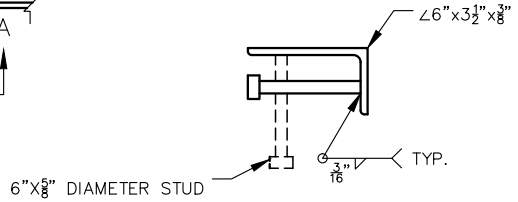
COCHISE COUNTY	HIGHWAY & FLOODPLAIN STANDARD DETAIL	RECREATIONAL TRAILHEAD AND TRAIL PARKING AREA	DRAFT 08-22-2017	DETAIL NO. CC233-2



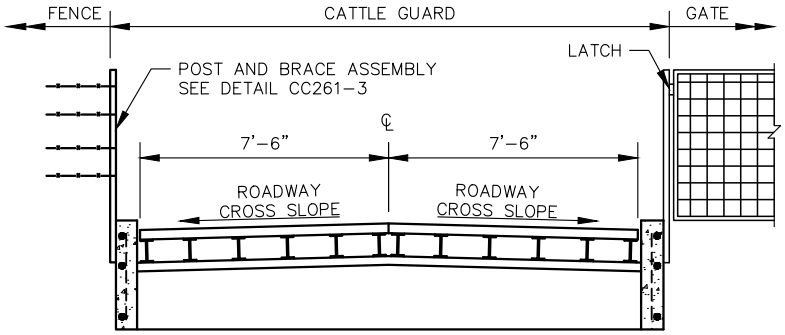
PLAN



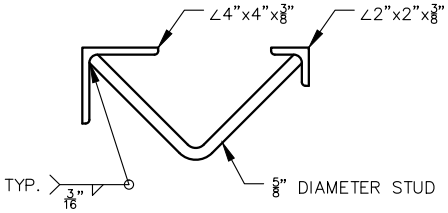
ANGLE ASSEMBLY DETAIL 1



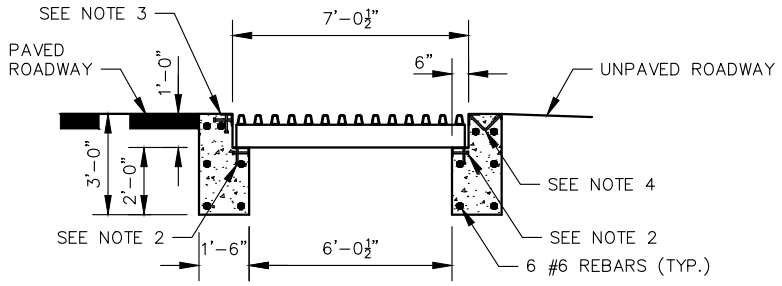
ANGLE ASSEMBLY DETAIL 2



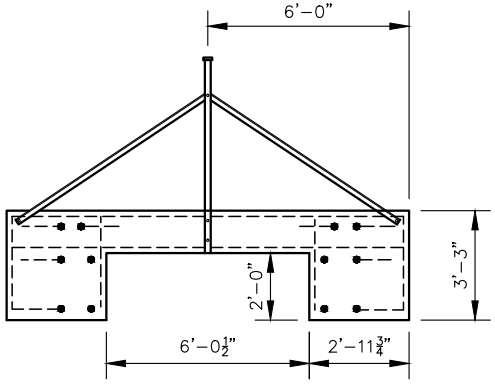
SECTION A-A



ANGLE ASSEMBLY DETAIL 3



SECTION B-B



END VIEW

NOTES:

1. CATTLE GUARD SHALL INCLUDE TWO (2) CLAMPS PER DETAIL CC261-4 AT EACH GAP BETWEEN TWO (2) GRILL UNITS, ONE AT EACH END. CLAMPS SHALL BE ADJUSTED TO PROVIDE A 1/4-INCH, PLUS OR MINUS 1/16-INCH GAP BETWEEN ADJACENT GRILL UNITS.
2. GRILL UNITS SHALL BE SET ON AN ANGLE IRON ASSEMBLY CONSISTING OF ONE PIECE OF 6"X3½"X⅜" ANGLE IRON AND STUDS WITH A HEAD. THE STUDS SHALL BE PLACED ON 1'-0" ALTERNATE CENTERS. SEE ANGLE ASSEMBLY DETAIL 2.
3. CATTLE GUARD SHALL BE SLOPED TO CONFORM TO THE ROADWAY GRADE AND CROSS-SECTION, EXCEPT THAT WHERE AN ODD NUMBER OF GRILL UNITS IS SPECIFIED IN A CROWNED ROADWAY, THE CENTER GRILL UNIT SHALL HAVE A LEVEL CROSS SLOPE.
4. WHERE THE ADJACENT ROADWAY IS PAVED, AN ANGLE IRON ASSEMBLY SHALL CONSIST OF ONE PIECE OF 4"X4"X⅜" ANGLE IRON AND STUDS WITH A HEAD. THE STUDS SHALL BE PLACED ON 1'-0" ALTERNATE CENTERS. SEE ANGLE ASSEMBLY DETAIL 1.
5. WHERE THE ADJACENT ROADWAY IS UNPAVED, AN ANGLE IRON ASSEMBLY SHALL CONSIST OF ONE 4"X4"X⅜" ANGLE IRON, ONE 2"X2"X⅜" ANGLE IRON, AND CONNECTED WITH STUDS. THE ASSEMBLY SHALL BE CROWNED AT THE CENTERLINE AND CONSTRUCTED WITH A BEVEL CUT AND WELDED. THE STUDS SHALL BE BENT 90° AND PLACED ON 1'-0" CENTERS. SEE ANGLE ASSEMBLY DETAIL 3.
6. EACH ANGLE IRON AND ANGLE IRON ASSEMBLY SHALL BE FABRICATED TO FORM A SINGLE PIECE FOR THE FULL LENGTH OF THE CATTLE GUARD.
7. QUANTITIES SHOWN FOR CONCRETE AND REBAR ARE APPROXIMATIONS FOR INFORMATIONAL PURPOSES ONLY.
8. WHEN A GATE IS TO BE INSTALLED, IT SHALL BE CALLED OUT ON THE PLANS.
9. ALL REBAR SHALL HAVE A MINIMUM COVER OF 3", OR AS SHOWN ON THE PLANS.
10. CATTLE GUARD BEAMS SHALL BE HS-20 LOADING UNLESS OTHERWISE SHOWN ON THE PLANS.

UNIT TABLE

ROADWAY WIDTH (FT)	GRILL UNITS REQUIRED	CONCRETE (CU YD)	REBAR (LBS)
12	2	5.8	175
16	3	8.0	240
20	4	10.3	310
28	5	12.5	375
34	6	14.7	445
36	6	14.7	445
38	7	16.9	510
40	7	16.9	510

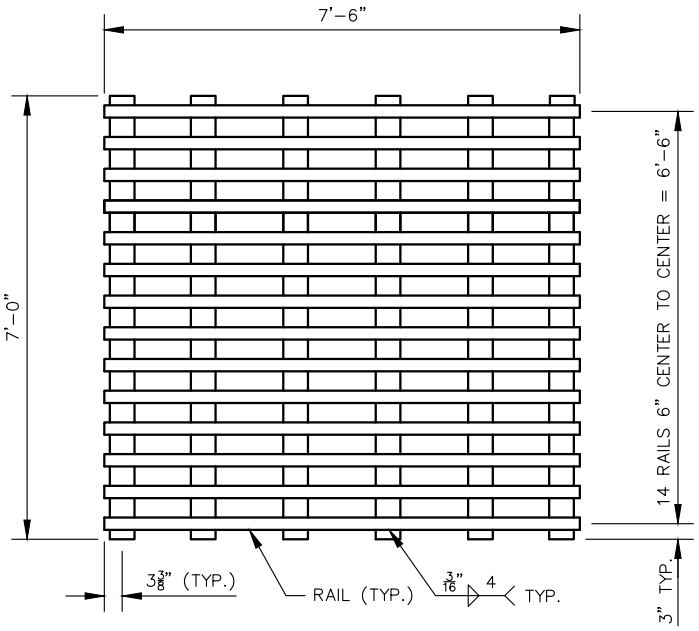
COCHISE COUNTY

HIGHWAY & FLOODPLAIN STANDARD DETAIL

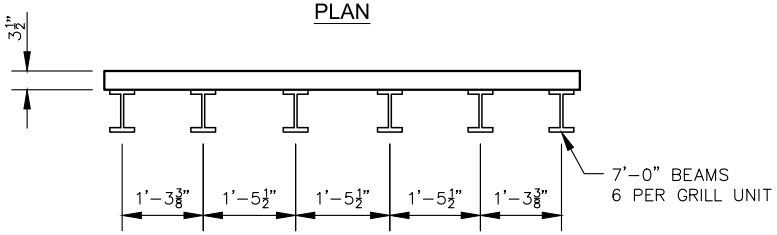
ROADWAY CATTLE GUARD

DRAFT 08-22-2017

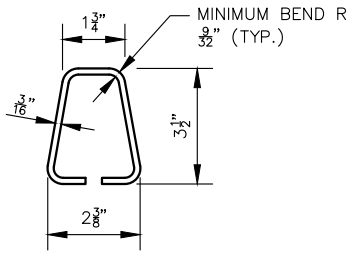
DETAIL NO. CC261-1



PLAN

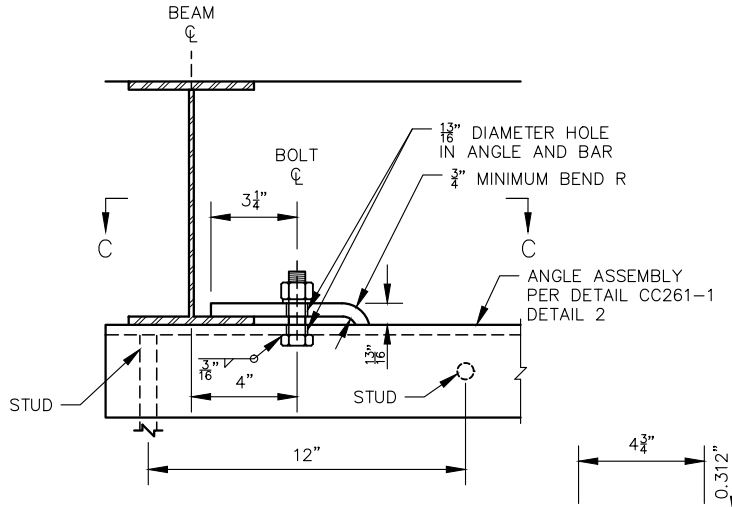


ELEVATION

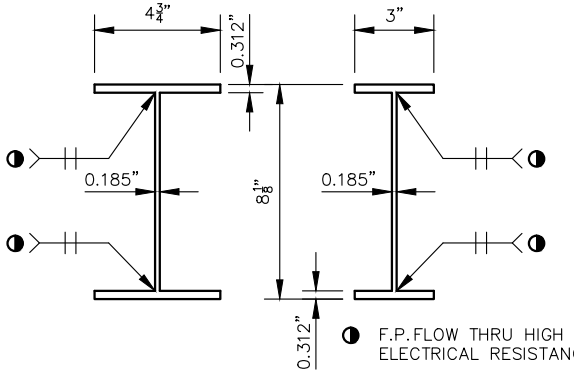


RAIL GRILL UNIT

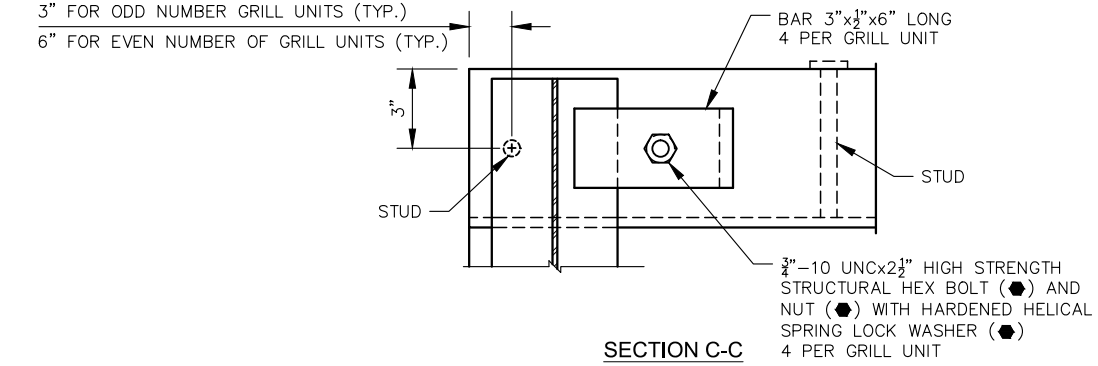
⬣ – INDICATES AASHTO, AGC & ARTBA TASK FORCE 13 DESIGNATION



GRILL CLAMP



BEAMS



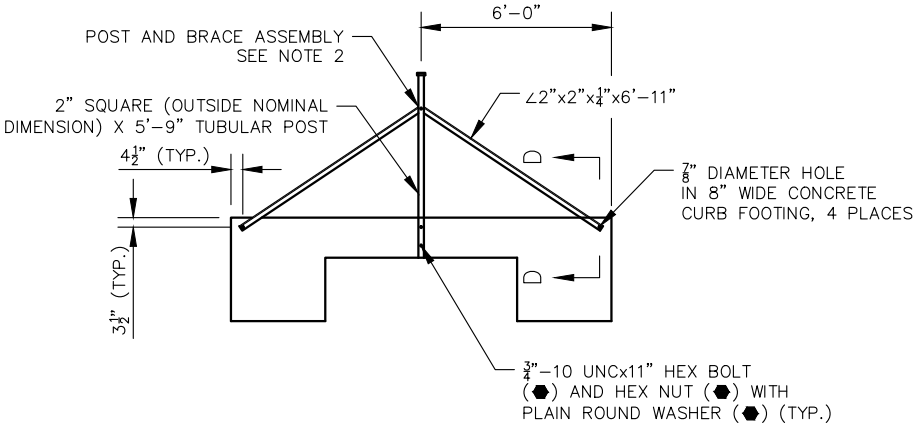
SECTION C-C

COCHISE COUNTY	HIGHWAY & FLOODPLAIN STANDARD DETAIL	ROADWAY CATTLE GUARD	DRAFT 08-22-2017	DETAIL NO. CC261-2

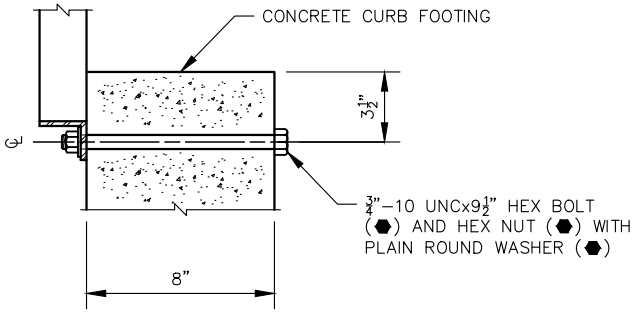
NOTES:

1. MATERIAL FOR SHOULDER TRANSITION SHALL BE PLACED TO THE FINISHED ROADWAY ELEVATION FOR THE ENTIRE LENGTH OF THE TRANSITION. WHEN THE ROADWAY IS PAVED, AGGREGATE SUBBASE OR AB SHALL BE USED. WHEN THE ROADWAY IS UNPAVED, A MATERIAL EQUIVALENT TO THE EXISTING ROADWAY SHALL BE USED.
2. ON STEEPER GRADES, THE POST SHALL BE INSTALLED PLUMB TO ALIGN WITH ADJACENT FENCING. THE BRACE ASSEMBLY MAY BE MODIFIED AS NECESSARY TO SUPPORT THE POST.

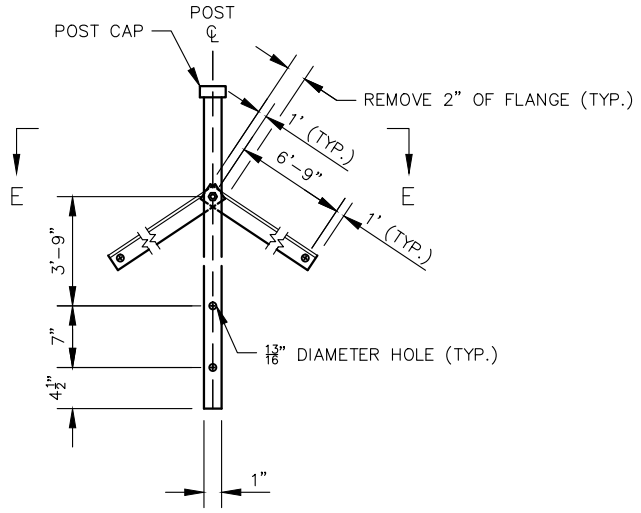
⬣ – INDICATES AASHTO, AGC & ARTBA TASK FORCE 13 DESIGNATION



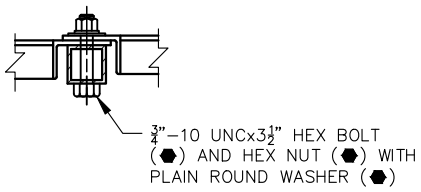
END VIEW



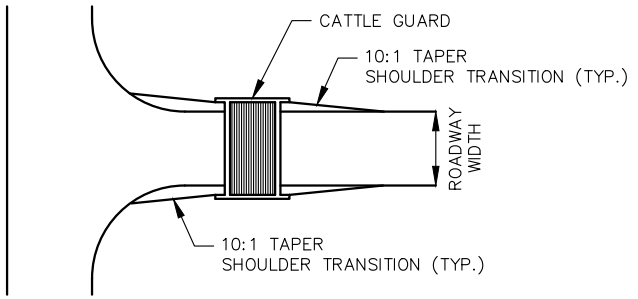
SECTION D-D



POST AND BRACE ASSEMBLY



SECTION E-E

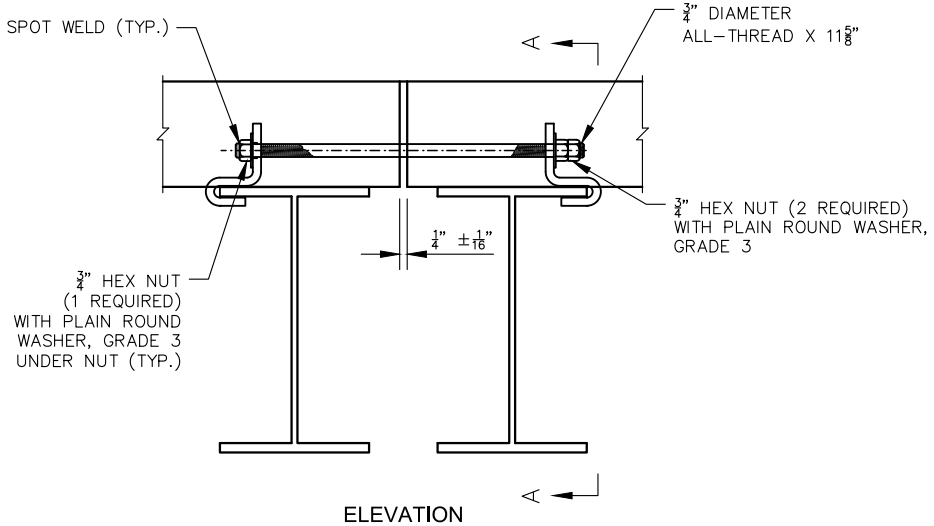


SHOULDER TRANSITION AT CATTLE GUARDS

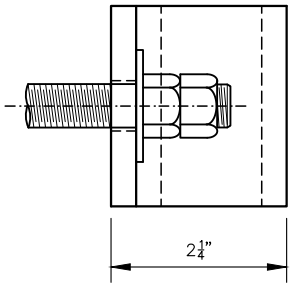
COCHISE COUNTY	HIGHWAY & FLOODPLAIN STANDARD DETAIL	ROADWAY CATTLE GUARD	DRAFT 08–22–2017	DETAIL NO. CC261-3

NOTE:

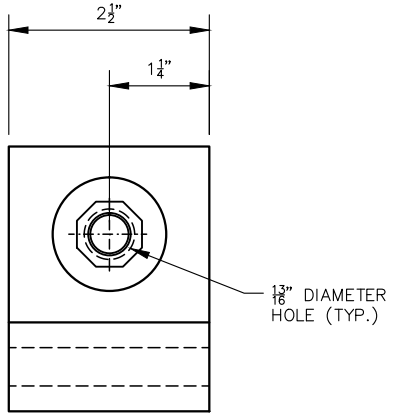
1. APPLY A HEAVY DUTY, HIGH-STRENGTH ANAEROBIC THREAD-LOCKING COMPOUND TO THE THREADS BEFORE INSTALLING THE DOUBLE NUTS.



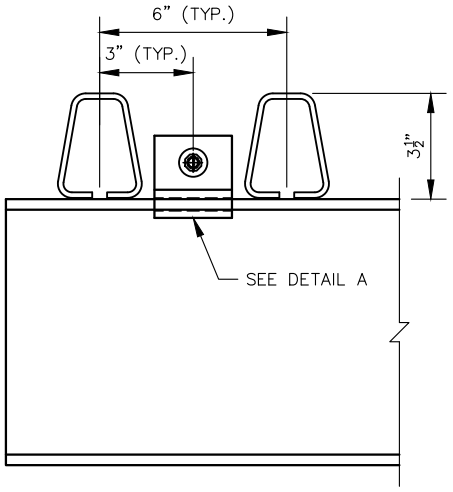
ELEVATION



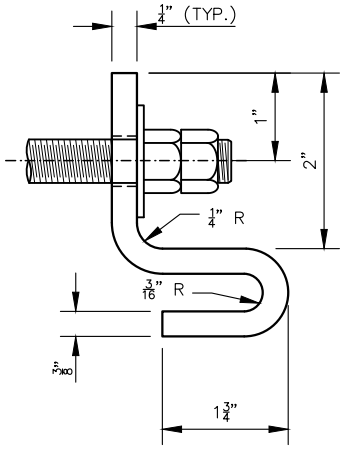
PLAN



DETAIL A



SECTION A-A

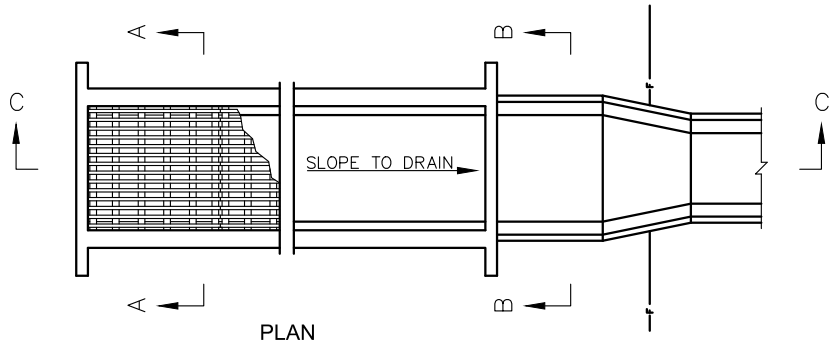


ELEVATION

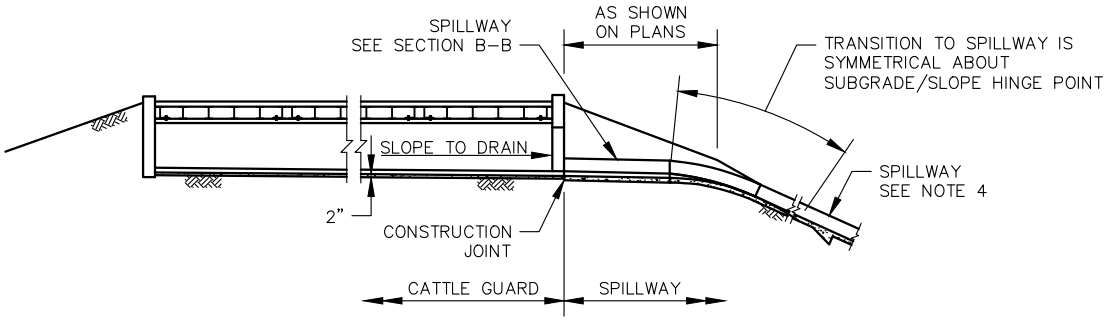
COCHISE COUNTY	HIGHWAY & FLOODPLAIN STANDARD DETAIL	ROADWAY CATTLE GUARD	DRAFT 08-22-2017	DETAIL NO. CC261-4

NOTES:

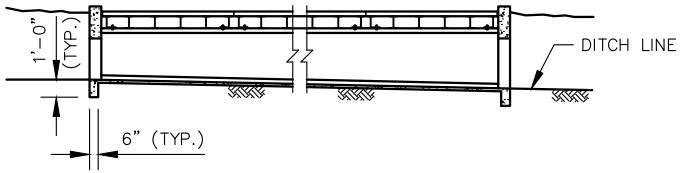
1. SEE DETAILS CC261-1 THROUGH CC261-4 FOR ALL OTHER CATTLE GUARD DETAILS.
2. THIS STANDARD SHALL BE USED IN EMBANKMENT OR WHERE HIGHLY ERODABLE SOIL IS FOUND.
3. ALL CONCRETE SHALL BE CLASS B.
4. SPILLWAY SHALL BE PER PLANS, AS DETAILED BY THE DESIGN ENGINEER.



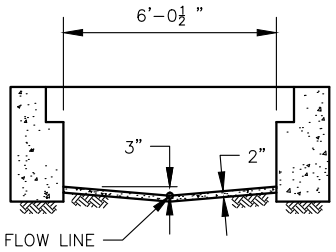
PLAN



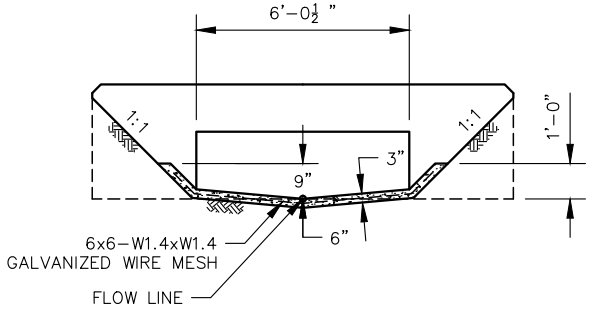
SECTION C-C
IN EMBANKMENT



SECTION C-C
WHERE USED FOR THROUGH DRAINAGE
CATTLE GUARD OPEN BOTH ENDS

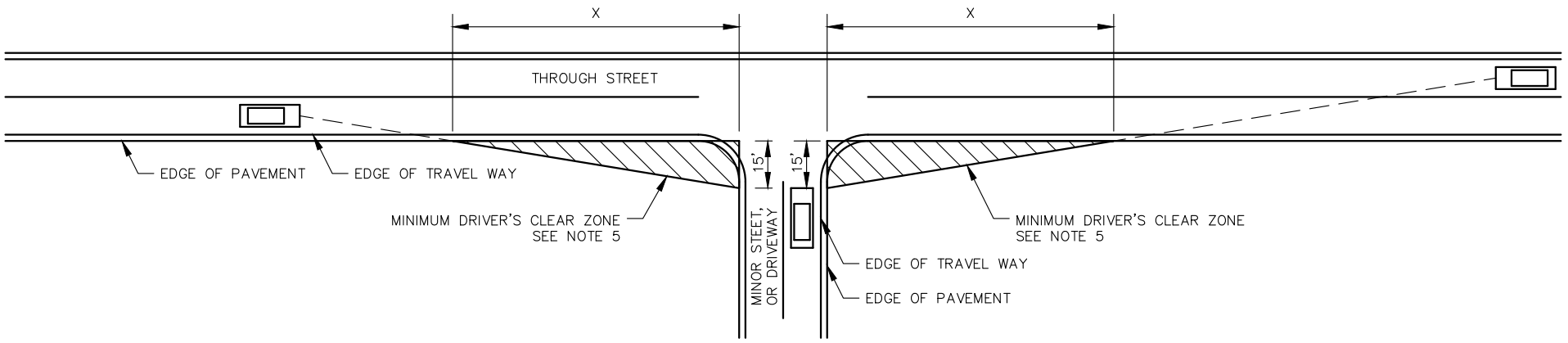


SECTION A-A



SECTION B-B

COCHISE COUNTY	HIGHWAY & FLOODPLAIN STANDARD DETAIL	CATTLE GUARD, DRAINAGE	DRAFT 08-22-2017	DETAIL NO. CC261-5

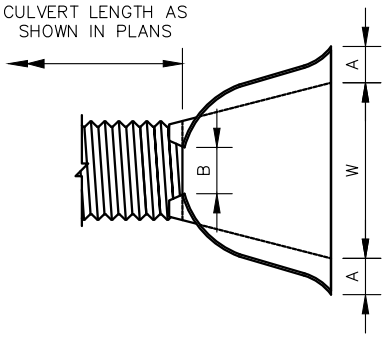


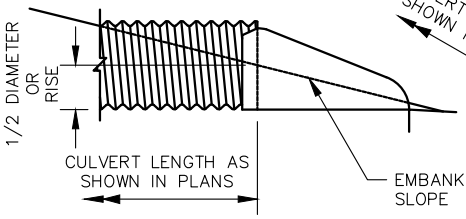
POSTED THROUGH SPEED	X DISTANCE
25 MPH	280 FEET
35 MPH	390 FEET
45 MPH	500 FEET
55 MPH	550 FEET
65 MPH	650 FEET

NOTE:

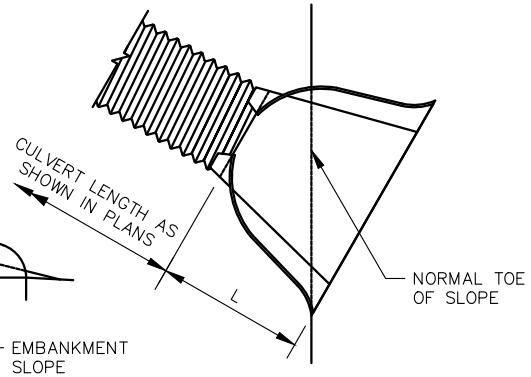
1. A SIGHT DISTANCE TRIANGLE SHALL BE DETERMINED FOR EACH CONTROLLED STREET OR DRIVEWAY THAT INTERSECTS A THROUGH OR UNCONTROLLED STREET.
2. THE SIGHT DISTANCE TRIANGLE IS MEASURED FROM EDGE OF PAVEMENT TO EDGE OF PAVEMENT OR, IF AN UNPAVED ROADWAY, FROM THE EDGE OF TRAVELWAY.
3. DETERMINATION OF SIGHT DISTANCE TRIANGLES MAY BE CALCULATED BY A TRAFFIC OR CIVIL ENGINEER, CONSISTENT WITH AASHTO GREEN BOOK, TO PROVIDE AN UNOBSTRUCTED VIEW OF THE ROADWAY VISIBLE TO THE DRIVER.
4. IF FREQUENT OR HIGH LEVELS OF LARGE TRUCK TRAFFIC IS ANTICIPATED AT THE APPROACH, INCREASED INTERSECTION SIGHT DISTANCE MAY BE WARRANTED AND SHOULD BE CALCULATED CONSISTENT WITH AASHTO GREEN BOOK.
5. NO SCREENING, LANDSCAPING, VEGETATION, STRUCTURES, PARKING AREAS OR OTHER OBSTRUCTION TO VISIBILITY BETWEEN THE HEIGHTS OF 3 AND 10 FEET ABOVE THE TOP OF CURB OR CENTERLINE GRADE OF THE STREET SHALL BE PERMITTED WITHIN THE CLEAR ZONE, AS DEFINED BY THE SIGHT DISTANCE TRIANGULAR AREA. DEVELOPMENT SHALL BE SET BACK OR RESTRICTED IN ORDER TO PROVIDE A CLEAR SIGHT DISTANCE.

COCHISE COUNTY	HIGHWAY & FLOODPLAIN STANDARD DETAIL	SIGHT DISTANCE TRIANGLE	DRAFT 08-22-2017	DETAIL NO. CC300





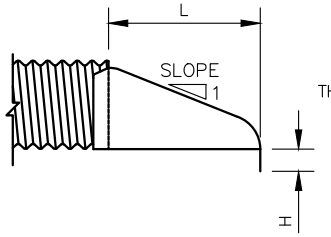
RIGHT ANGLE CULVERT

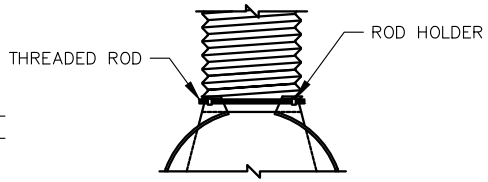


SKEWED CULVERT

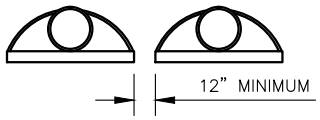
NOTES:

1. THE END SECTION MAY BE JOINED TO THE PIPE OR CONNECTOR SECTION BY BOLTS, RIVETS, DIMPLED BANDS, SLIP–SEAM BANDS OR THREADED ROD TYPE FASTENERS. FOR ALLOWABLE CONNECTOR TYPES, SEE TABLE.
2. THE TYPE 1 CONNECTOR IS BOLTED OR RIVETED. MAXIMUM CIRCUMFERENTIAL FASTENER SPACING SHALL BE 12" AND WITH A MINIMUM OF 8 FASTENERS PER JOINT. THE TYPE 1 JOINT MAY BE USED WITH EITHER ANNULAR OR HELICAL CORRUGATIONS.
3. TYPE 2 AND 3 CONNECTORS SHALL ONLY BE USED WITH ANNULAR HELICAL PIPE WITH A REQUISITE NUMBER OF ANNULAR CORRUGATIONS.
4. TYPE 4 CONNECTOR SHALL ONLY BE USED WITH HELICAL PIPE.
5. ALL STEEL END SECTION COMPONENTS SHALL BE GALVANIZED.
6. TOE OF EMBANKMENT SHALL BE WARPED TO MATCH TOE OF SKEWED END SECTION.
7. A BERM SHALL BE ADDED TO ABNORMAL PROJECTIONS PER STD DWG C–13.10.
8. THE FOREGOING APPLIES TO ALL CROSS–SECTION CONFIGURATIONS.



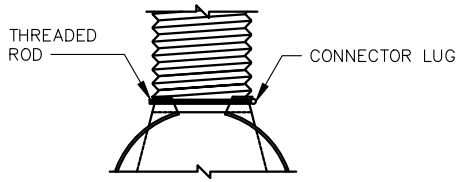


TYPE 2
THREADED ROD
CONNECTIONS

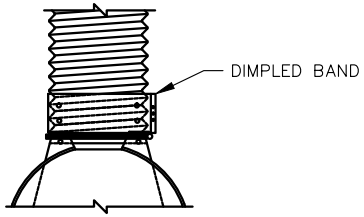


SPACING FOR MULTIPLE INSTALLATION

CIRCULAR PIPE		DIMENSIONS (IN)						
DIAMETER (IN)	GAUGE	A±1	B MAX	H±1	L±1½	W±2	APPROXIMATE SLOPE	CONNECTION TYPE
18	16	8	8	6	31	36	2 ½	2, 3, 4
24	16	10	13	6	41	48	2 ½	2, 3, 4
30	14	12 ½	12 ½	8	51	57	2 ½	2, 4
36	14	14 ½	12	9	60	72	2 ½	2, 4
42	12	17	11	10 ½	69	84	2 ½	3



TYPE 4
THREADED ROD
CONNECTIONS



TYPE 4
DIMPLED BAND
CONNECTIONS

PIPE ARCH			DIMENSIONS (IN)						
SPAN (IN)	RISE (IN)	GAUGE	A±1	B MAX	H±1	L±1½	W±2	APPROXIMATE SLOPE	CONNECTION TYPE
21	15	16	7 ½	11	6	24	36	2 ½	2, 3, 4
28	20	16	8	16	6	32	48	2 ½	2, 3, 4
35	24	14	10	16	6	39	60	2 ½	2, 4
42	29	14	12	12	7 ½	46	75	2 ½	2, 4
49	33	12	13 ½	20	9	53	84	2 ½	3

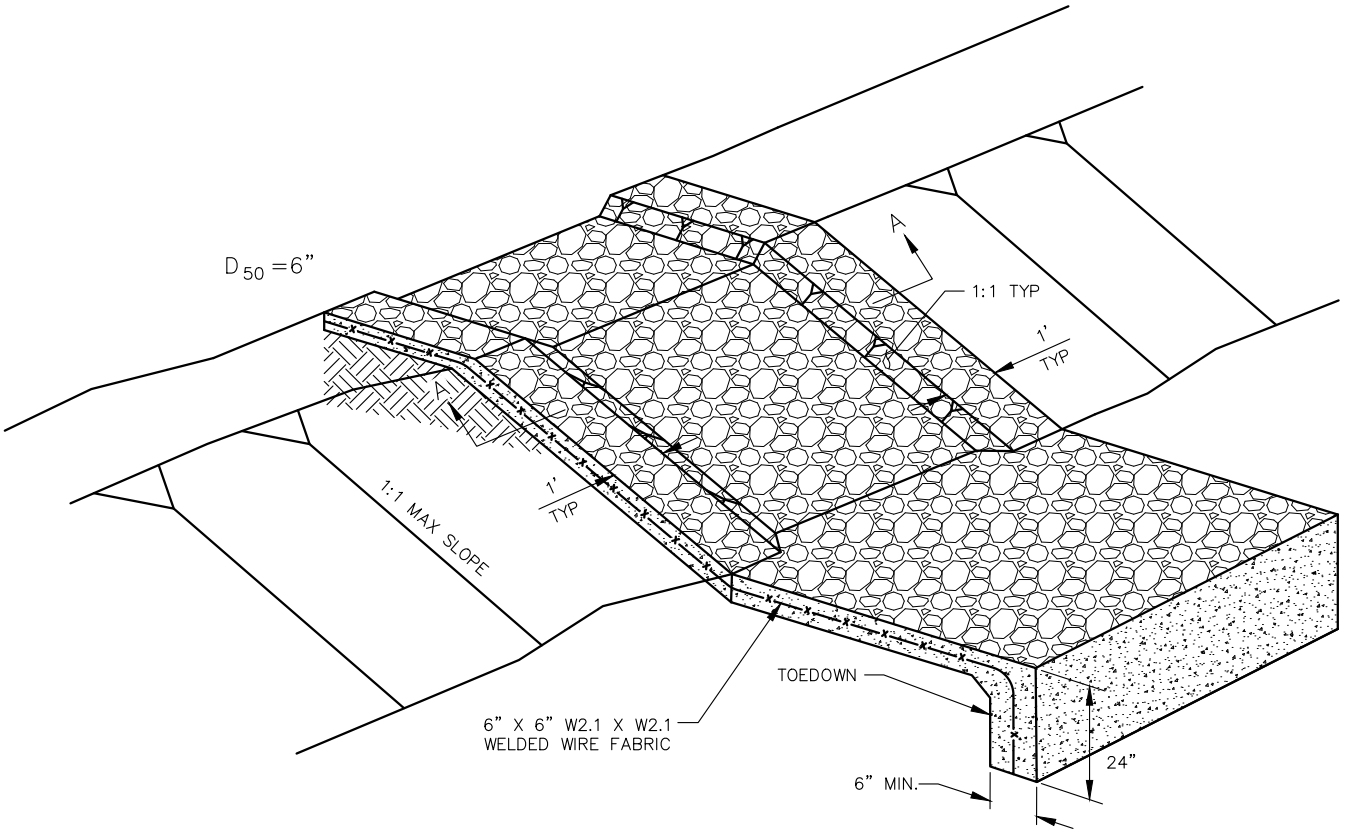
COCHISE COUNTY

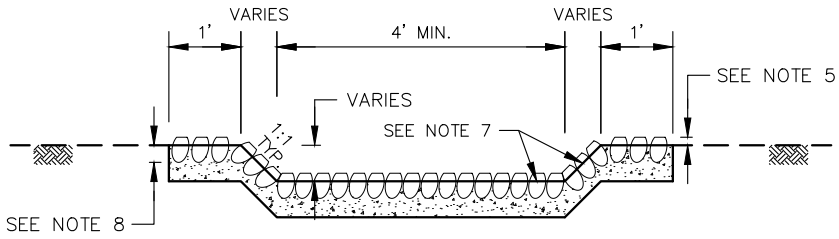
HIGHWAY & FLOODPLAIN
STANDARD DETAIL

CORRUGATED METAL PIPE END SECTION

DRAFT
08–22–2017

DETAIL NO.
CC511





SECTION A-A

NOTES:

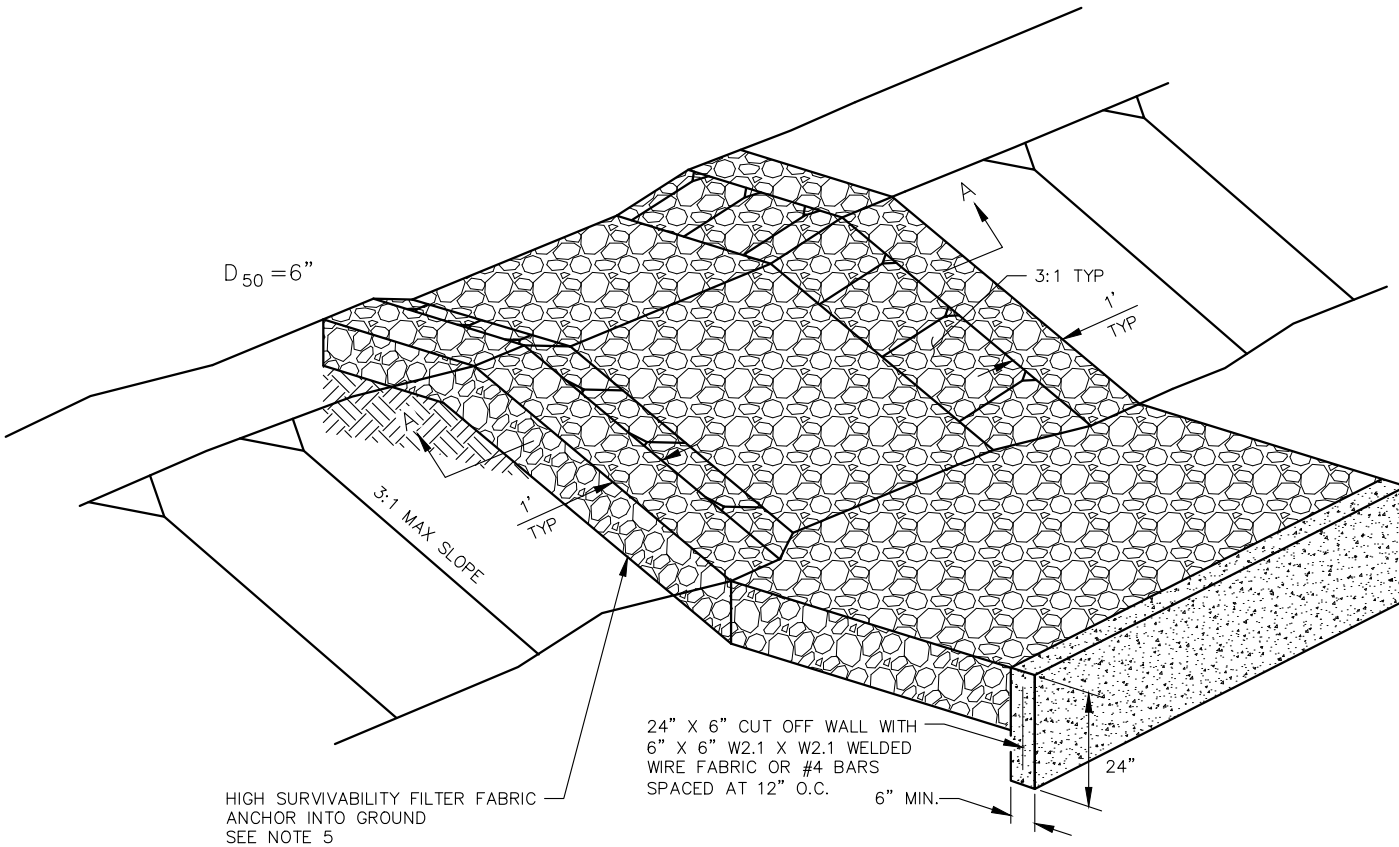
1. PREPARE THE BED FOR THE RIP RAP BY EXCAVATING AND SHAPING THE SLOPES AS WELL AS CONSTRUCTING THE TOE FOR RIP RAP INSTALLATION.
2. ALL STONES SHALL BE ANGULAR WITH ROUGH FLAT SURFACE TEXTURE. STONES SHALL BE APPROVED BY THE COUNTY ENGINEER.
3. STONE SIZE (D_{50}) SHALL BE 6" OR IN ACCORDANCE TO WHAT IS SHOWN ON THE PLANS.
4. THICKNESS OF ANY RIP RAP LAYER SHALL BE AT LEAST 12" OR TWICE THE D_{50} SHOWN ON THE PLANS.
5. STONE TOLERANCE SHALL NOT EXCEED 1 INCH IN HEIGHT.
6. GAP TOLERANCE BETWEEN STONES SHALL NOT EXCEED 1 INCH.
7. LAY THE MAJORITY PLANE OR FACE OF STONE PERPENDICULAR TO THE SLOPE.
8. EMBED RIP RAP MINIMUM 3" INTO CONCRETE.

DESIGN GRADATION FOR RIP RAP D_{50}=6"	
% PASSING	SIZE (INCHES)
100	10
85	8
50	6
15	3

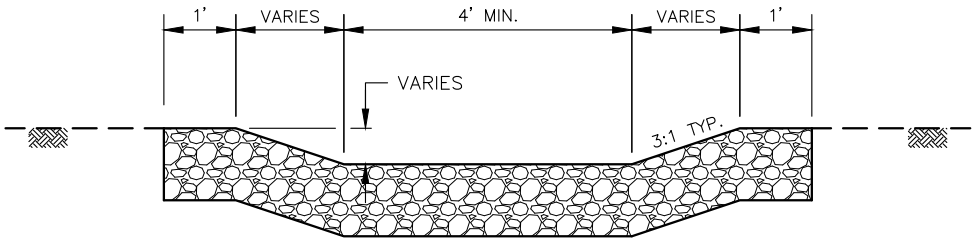
COCHISE COUNTY	HIGHWAY & FLOODPLAIN STANDARD DETAIL	HANDPLACED GROUTED RIP RAP EMBANKMENT PROTECTION SPILLWAY	DRAFT 08-22-2017	DETAIL NO. CC560-1

NOTES:

1. PREPARE THE BED FOR THE RIP RAP BY EXCAVATING AND SHAPING THE SLOPES AS WELL AS CONSTRUCTING THE TOE FOR RIP RAP INSTALLATION.
2. ALL STONES SHALL BE ANGULAR WITH ROUGH FLAT SURFACE TEXTURE. STONES SHALL BE APPROVED BY THE COUNTY ENGINEER.
3. STONE SIZE (D_{50}) SHALL BE IN ACCORDANCE TO WHAT IS SHOWN ON THE PLANS.
4. THICKNESS OF ANY RIP RAP LAYER SHALL BE AT LEAST TWICE THE D_{50} SHOWN ON THE PLANS.
5. FILTER FABRIC SHALL CONFORM TO SECT. 224.3.1.



DESIGN GRADATION FOR RIP RAP D_{50}=6"	
% PASSING	SIZE (INCHES)
100	10
85	8
50	6
15	3



SECTION A-A

COCHISE COUNTY	HIGHWAY & FLOODPLAIN STANDARD DETAIL	DUMPED RIP RAP EMBANKMENT PROTECTION SPILLWAY	DRAFT 08-22-2017	DETAIL NO. CC560-2

COCHISE COUNTY

HIGHWAY AND FLOODPLAIN DEPARTMENT

SUPPLEMENT TO THE

MARICOPA ASSOCIATION OF GOVERNMENTS'

UNIFORM STANDARD SPECIFICATIONS

FOR PUBLIC WORKS CONSTRUCTION

August 2017

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COCHISE COUNTY
HIGHWAY AND FLOODPLAIN DEPARTMENT

SUPPLEMENT TO THE
MARICOPA ASSOCIATION OF GOVERNMENTS'
UNIFORM STANDARD SPECIFICATIONS
FOR PUBLIC WORKS CONSTRUCTION

The Cochise County Standard Specifications for Public Improvement consists of the Uniform Standard Specifications and Details for Public Works Construction, current edition, as sponsored by the Maricopa Association of Governments (MAG) and all revisions – except as provided in this Cochise County supplement to those MAG standards. Specifications for work not contained within this standard or MAG standard shall comply with applicable section of the Arizona Department of Transportation, Standards Specifications for Road and Bridge Construction.

Work performed within Cochise County right-of-way shall comply with these standards. The method of measurement and/or basis of payment for work performed under a County right-of-way permit is at the discretion of the applicant and/or developer and their selected contractor. However, the method of measurement and basis of payment, as stated in these supplemental specifications, will be used for all County contract work.

The requirements contained herein supersede, and take precedence, over any conflicting requirements in the MAG Uniform Standard Specifications. Identification is by corresponding Uniform Standard Specification paragraph, section, or part number.

This supplement is available to contractors in a standard Word format on-line at www.cochise.az.gov

SECTION 101
ABBREVIATIONS AND DEFINITIONS

101.2 DEFINITIONS AND TERMS:

The following definition is revised:

Board of Supervisors: The Cochise County Board of Supervisors acting under the authority of the laws of the State of Arizona. Any reference to Maricopa County shall be construed to mean Cochise County.

Add the following:

Certified Laboratory: An AASHTO accredited laboratory, certified in the relevant engineering materials and testing specialty areas(s) referenced in the Contract Documents.

County: The Cochise County Highway & Floodplain Department, acting through its legally constituted officials, officers, or designated employees.

Mailbox: The mail receptacle and its supporting post or structure.

Maximum Density: The maximum dry density of soil obtained from the procedures defined in MAG Section 301.3.

Portland Cement Concrete Pavement: Concrete pavement that complies with MAG specification section 324

Professional Geologist: A person who has a current registration as a geologist granted by the Arizona State Board of Technical Registration.

Force Account Work: Work performed in accordance with MAG Section 109.

SECTION 102
BIDDING REQUIREMENTS AND CONDITIONS

102.2 CONTENTS OF PROPOSAL PAMPHLET, add the following:

Each pay item in the bid schedule contains an item number. The integer portion of the item number references the specification section related to the pay item. The decimal portion of the item number is established by the agency and is for agency use.

102.5 PREPARATION OF PROPOSAL:

Add the following to Section 102.5:

It shall be the responsibility of the prospective bidder to determine, prior to the submittal of its bid, if any addenda to the project have been issued by Cochise County. All addenda issued, if not already bound in the Special Provisions, shall be submitted by bidder with its bid and noted in the proposal section. All quantity adjustments, when required as the result of the addendum, shall be reflected on the bidding schedule in pen and ink.

Bids which do not reflect the appropriate changes on the bidding schedule or do not have all issued addenda attached and noted in the proposal section of the Contract will be rejected by the County.

Prospective bidders may call Cochise County to ascertain if addenda have been issued for this project.

102.6 SUBCONTRACTORS' LIST, add the following:

The Contractor shall submit to the County with the Bid documents a listing of all major Subcontractors and Material Suppliers the Contractor intends to use in the performance of the work specified in this contract. In determining the amount of work assigned to each Subcontractor, the Contractor shall adhere to the mandates set forth in Section 108.2, Subsection E, of the MAG Uniform Standard Specifications.

102.12, add the following:

(C) Submission of any unit prices in the bid proposal which are unbalance, either above or below the amount of a reasonable bid price as determined by the County Engineer, to the potential detriment of the contracting County.

SECTION 104
SCOPE OF WORK

104.1 WORK TO BE DONE:

104.1.4 Cleanup and Dust Control, replace the 3rd paragraph with the following:

The Contractor shall take whatever steps, procedures or means required preventing any dust nuisance due to his construction operations. The dust control measures shall be maintained at all times to the satisfaction of the Engineer and in accordance with the requirements of the Arizona Department of Environmental Quality (ADEQ) of Air Pollution Control Rules and Regulations.

104.1.4 Cleanup and Dust Control, add the following:

Contractor shall dispose of excess material or construction debris on an as-needed basis to keep the site safe to Contractor's personnel and the general public. Construction debris shall be disposed of only in a manner or in a location approved by the Engineer. The Contractor shall upon request file with the Engineer the written consent of the owner of any off-site location designated to receive excess material or debris.

Contractor shall be responsible for the safe and clean condition of the site during the entire period the site is under Contractor's care, custody and control.

104.3 VALUE ENGINEERING

Section 104, add the following:

104.3.1 Purpose:

This clause defines a Construction Incentive Change Order Proposal ("CICOP") and establishes the policy and procedure for the application of CICOP's in the Cochise County construction process.

104.3.2 Definition:

A CICOP is a defined, written proposal for a change order during construction and shall be initiated, developed and identified by Contractor. The CICOP shall result in gross capital savings and a net capital

improvement cost reduction, shall not increase the total maintenance cost of the project and shall meet the following requirements:

104.3.2.1 All Time Extensions for the project shall be agreed upon by both parties at the time the CICOP is approved. The County's determination shall be binding upon the Contractor and shall not be subject to challenge.

104.3.2.2 The CICOP shall not alter the initially intended function, quality and safety standards of the project.

104.3.2.3 The CICOP shall not change the overall scope of the work, which would require a re-bidding of the project.

104.3.2.4 The CICOP shall not conflict with any contract provisions regarding proprietary and restrictive specifications for bids in connection with Uniform Standard Specifications and details, or any other applicable specifications.

104.3.2.5 The CICOP shall not cause undue interruption of the contract work schedule.

104.3.2.6 The proposed changes in connection with the CICOP shall comply with all federal, state and local regulations, mandates and permits.

104.3.2.7 If the Contractor wishes to submit a CICOP, he shall submit a preliminary CICOP in writing, which shall address all components required for a final CICOP, in summary form. The County will review the preliminary CICOP and inform the Contractor in writing if the County wishes to implement the CICOP. The Contractor would then be requested to prepare a detailed final CICOP.

104.3.3 Applicability:

All Cochise County construction contracts.

104.3.4 Content:

The CICOP shall contain pertinent information and support documentation to allow comprehensive review by the appropriate contracting agency. At a minimum, the CICOP shall include the following information:

104.3.4.1 Name and title of individuals associated with the design and preparation of the CICOP.

104.3.4.2 Detailed scope description with sealed plans and specifications. A comparison summary of present design, proposed changes and detailed description of the advantages and disadvantages for each change proposed. The CICOP shall be sealed and signed by a Professional Engineer.

104.3.4.3 Comprehensive procedure and schedule outlining implementation of CICOP, including all required contract amendments and the absolute latest approval date for the CICOP.

104.3.4.4 Estimated cost summary which shall include but not necessarily be limited to the following:

104.3.4.4.1 Project cost with and without CICOP, which shall include the following items:

104.3.4.4.1.1 Quantities of materials and equipment.

104.3.4.4.1.2 Unit prices for materials and equipment.

104.3.4.4.1.3 Hourly rates and total labor hours required for installation.

104.3.4.4.1.4 Overhead and fee percentage of Contractor and all subcontractors of any tier involved in the performance of the work outlined in the CICOP.

104.3.4.4.2 Operations and maintenance cost prior to and after implementation of CICOP.

104.3.4.4.3 Implementation cost of the CICOP not covered in Section 104.3.4.4.1.4, above.

104.3.4.4.4 Contractor's cost of the savings, based on the formula specified below.

104.3.4.4.5 Other pertinent data, as may be required by the County to prepare and execute a change order to the Contract.

104.3.4.4.6 If Contractor fails to notify the County of all required changes for the CICOP during the initial CICOP approval stage, Contractor shall absorb all costs connected with the implementation of changes of which the County was not made aware of. If conditions occur, which could not be foreseen by any prudent Contractor, the County may enter into negotiations with Contractor and make the necessary cost adjustments to the Contract.

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104.3.4.4.7 All CICOP's become public record when submitted to the County for review and approval. Propriety information may be protected by Contractor.

104.3.4.4.8 For CICOP's accepted by the County, processing procedure for change orders shall be used.

104.3.4.4.9 If a CICOP is rejected by the County, Contractor may not appeal such a rejection.

104.3.5 Sharing Provisions:

Upon acceptance and implementation of a CICOP, Contractor will share the net capital savings derived from the implementation of the CICOP, in accordance with the formula outlined below:

104.3.5.1 Initial construction cost minus revised construction cost minus CICOP development cost and CICOP implementation cost equals Net Capital Savings.

104.3.5.1.1 The CICOP implementation cost shall include Contractor's actual cost and fee for reviewing and redesigning the CICOP, documented to the satisfaction of the County.

104.3.5.1.2 CICOP development cost shall include Contractor's cost directly associated with the preparation of the CICOP package, documented to the satisfaction of the County.

104.3.5.1.3 CICOP implementation and development costs shall include COUNTY costs for review and approval of the CICOP package.

104.3.5.2 Sharing Formula: Net Capital Savings, calculated in accordance with the formula outlined in Section 104.3.5.1, above, shall be shared with Contractor on an equal 50/50 percentage basis.

SECTION 105
CONTROL OF WORK

105.1 AUTHORITY OF THE ENGINEER, add the following:

The Engineer may adjust design grades or adjust the location of structures (especially drainage structures) prior to construction. Such adjustments are considered minor changes in the work and do not constitute extra work.

105.2 PLANS AND SHOP DRAWINGS, add the following:

Initial submittal for review – five copies, of which one copy will be returned to the Contractor within five working days. Final submittal for approval – five copies, of which two copies will be returned to the Contractor within five working days.

105.4 COORDINATION OF PLANS AND SPECIFICATIONS:

Section 105.4 is replaced with the following:

Contractor shall perform the work under this Contract in accordance with the intent of the Plans and Specifications and shall not take advantage of any error or omission in the Plans and/or specifications. In the event Contractor discovers an error or omission in the Plans and/or specifications, Contractor shall promptly advise the Engineer of such an error or omission.

The written dimensions on the Plans are presumed to be correct, but the Contractor is required to check carefully all dimension and quantities before beginning work thereon. Should any errors or omissions be discovered, the Engineer shall be so advised and the proper corrections made. Any such adjustments made by the Contractor, without prior approval, shall be at this own risk, and the settlement of any complications arising from such adjustments shall be made by the Contractor at his own expense. All notes on the Plans shall be carefully observed by the Contractor and ar a part of the Contract.

105.6 COOPERATION WITH UTILITIES, add the following:

Contractor is solely responsible for any damage to existing utilities resulting from Contractor's operations at the site. The use of hand tools to expose a marked facility is required when proposed excavation is within the 2.0-foot tolerance zone of a marked facility, or if uncertainty exists as to the exact location of a facility.

An attempt has been made by the County to identify the location of all underground utilities located within the perimeter of the site and to design the location and elevation of all irrigation and drainage pipes, culverts and structures to avoid interference with existing utilities. It shall be the Contractor's

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responsibility to cooperate with the appropriate utility companies in order to facilitate requested adjustments of obstructing utilities. (Please refer to the Special Provisions for specific telephone numbers and contact persons of utilities within the project area).

Contractor's installation of conduits, brackets, piping, valve adjustments or other material at the request and for the convenience of the utility shall be paid by the utility unless specifically identified otherwise in the plans or the Special Provisions. Contractor shall make all required arrangements for such construction and payment with the utility. The County will not extend the performance period of the contract to accommodate construction performed for the convenience of the utility.

105.8 CONSTRUCTION STAKES, LINES AND GRADES:

Section 105.8 is replaced with the following:

The County will set or provide the information for the bench marks used for the design of County projects. The Contractor shall be responsible for all construction staking. Blue top control shall be set to assure conformance to grade longitudinally and transversely.

The minimum construction staking shall consist of the following:

(A) Right-of-Way lines at 250 ft. intervals for clearing, fencing, and control of Contractor's operations.
(B) Slope stakes shall be offset from the edge of the embankment at 100 ft. intervals.
(C) Blue tops in subgrade at centerline and edge of pavement at 100 ft. intervals except on curves with all horizontal and vertical points.
(D) Blue tops on aggregate base course at centerline, edge of pavement, and 1/4 points at 50 ft. intervals with all horizontal and vertical points.
(E) Catch basin stakes shall be offset at 10 ft. and 15 ft. to the center of the structure with cuts or fills shown to the top of grate.
(F) Grade and line stakes for all structures, pipe lines, culverts, and ditches.
(G) Straddle points for permanent monuments.

105.12 MAINTENANCE DURING CONSTRUCTION, add the following:

The Contractor shall be responsible to protect the construction site, construction activities, and new construction from the detrimental effects of weather, including flooding, until acceptance by the Engineer.

105.15 ACCEPTANCE,

(A) Partial Acceptance: Delete this paragraph

Add the following:

The Contractor may request an inspection to establish substantial completion when all of the following have occurred:

- All pavement, pavement markings and signing are complete and accepted and traffic can move unimpeded through the project at the posted speed;
- All pedestrian pathways are completed and accepted and pedestrians are not restricted by any construction activity;
- All guardrails, drainage devices, ditches, excavation and embankment have been accepted;
- The only work left for completion is incidental, away from vehicle and pedestrian traffic, and does not affect the safety or convenience of the traveling public.

A notice of substantial completion shall be issued when the Engineer determines after an inspection that all conditions for substantial completion have been met. The decision whether the project is substantially complete is within the sole discretion of the Engineer. The inspection date requested by the Contractor for the substantial completion inspection shall be the date of substantial completion if the Engineer determines the conditions for substantial completion have been met. Liquidated damages shall not be assessed after the substantial completion date.

SECTION 106
CONTROL OF MATERIALS

106.2 SAMPLES AND TEST OF MATERIALS, replace the first paragraphs with the following:

The County will provide quality assurance testing to verify the quality of the finished project. The testing will, in no way, relieve the Contractor of his responsibility for his own quality control, assurance, and furnishing materials and finish products that meet the project requirements.

The Engineer will coordinate the quality assurance testing required to complete the project with the Contractor, based on the Contractor's weekly construction schedule. The Contractor shall include in this weekly construction schedule the extent and type of quality assurance testing deemed necessary based on this completion of various stages of construction. Only complete stages of work will be tested.

Identification of quality assurance testing on the Contractor's weekly construction schedule shall not relieve the Contractor of the responsibility to notify the Engineer of said services not less than two (2) working days in advance of when the testing services are required in connection with the project. Any project delays or cost due to the Contractor failing to provide material testing request on the weekly schedule or lack of a weekly schedule will be the responsibility of the Contractor.

Replace the fourth paragraph with the following:

The laboratory responsible for the test shall furnish at least one copy of the test results to the Engineer and to the Contractor.

SECTION 107
LEGAL REGULATIONS AND RESPONSIBILITY TO PUBLIC

107.1 COMPLIANCE WITH LAWS, add the following:

Contractor, in connection with any activity under this Contract, shall not discriminate against any person on the grounds of race, color, religion, sex, national origin, age, disability, political affiliation or belief. Contractor shall include a clause to this effect in all subcontracts. Contractor shall also comply with all applicable provisions of the Americans with Disabilities Act of 1990.

Contractor and its subcontractors and their respective employees, agents, and representatives, when performing the work described in the Construction Specifications, shall comply with all rules and regulations set forth by the County, pertaining to the safety, loss control and environmental regulations, and shall perform the work in compliance with governmental laws and regulations pertaining to occupational health, and environmental protection, including any local sound control and noise level rules, regulations and ordinances which apply to any work performed pursuant to the contract.

Contractor is solely responsible for jobsite ("site") conditions during all phases of construction, beginning with Contractor's mobilization of equipment and/or personnel until the work has been accepted by the Engineer and a certificate of completion has been issued by the County. Contractor's responsibility for the site during the period specified above shall not be limited to Contractor's working hours and shall include but not necessarily be limited to the following:

- Physical condition of the site;
- Safety of Contractor's personnel at the site and all
- other persons entering the site or areas adjacent to the site;
- Security of Contractor's equipment and material; and
- Reasonable aesthetic appearance of the site.

Contractor shall ensure that internal combustion equipment is operated with a muffler of a type recommended by the manufacturer.

107.2 PERMITS, add the following:

107.2.1 AZPDES (NPDES) Construction General Permit Requirements:

The Contractor shall comply with the Arizona Pollutant Discharge Elimination System (AZPDES) requirements and conditions administered by the Arizona Department of Environmental Quality (ADEQ). Compliance with AZPDES also includes compliance with the requirements of all municipal separate storm sewer systems (MS4) that are within the project limits.

107.2.1.1 Regulation Compliance: The Contractor, contractor employees, and subcontractors shall not discharge stormwater or non-stormwater from the construction site that is not in compliance with requirements and conditions of the AZPDES Construction General Permit for Arizona (AZCGP) as well as all other applicable federal, state and local laws, ordinances, statutes, rules and regulations

pertaining to stormwater discharge and air, ground water and surface water quality.

The Contractor shall be designated as the Operator, having day-to-day operational control of those activities at a project which are necessary to ensure compliance with a Stormwater Pollution Prevention Plan (SWPPP) for the site and other permit conditions. The Contractor is responsible for preparing, in a manner acceptable to the ADEQ and the EPA, all documents required by regulation, which shall include but not necessarily be limited to the following:

- Notice of Intent (NOI).
- Stormwater Pollution Prevention Plan (SWPPP).
- Notice of Termination (NOT).

107.2.1.2 NOI Submittal: The Contractor shall submit a Notice of Intent in accordance with the AZCGP. The Contractor shall identify on the NOI all non-stormwater discharges that are expected to be associated with the project's construction activities as required by the AZCGP.

Preliminary copies of the NOI and the SWPPP shall be available to the County during the pre-construction conference.

The Contractor shall ensure the completed and duly signed NOI form(s) are submitted in a timely manner to prevent a delay to project construction.

The AZPDES form shall be submitted to ADEQ's Phoenix office by certified mail or hand delivered to the address below:

Arizona Department of Environmental Quality

Surface Water Section - Stormwater and General Permits Unit 1110 West Washington Street, 5415A-1

Phoenix, AZ 85007

The form may also be faxed to ADEQ at 602-771-4528 or submitted via "smart NOI" accessible from the ADEQ's website:

http://www.azdeq.gov/environ/water/permits/stormwater.html

If the construction is near an impaired or unique water (a.k.a. an Outstanding Arizona Water), the SWPPP shall be submitted with the NOI. Permit activation may require 32 business days or more for construction sites near impaired or unique waters, as well as for construction sites with special concerns, therefore documentation is to be submitted to ADEQ as early as possible.

If the construction site is located in an urbanized area of Cochise County, the Contractor shall send a copy of the ADEQ certificate authorizing permit coverage to the local MS4 authority(s).

107.2.1.3 Time Extension: Failure by the Contractor or subcontractor of any tier to submit a NOI within the mandated time frame shall result in delay of the construction start date and no claims for extension of time will be granted for such a delay.

107.2.1.4 SWPPP: The Contractor shall develop, sign and certify, implement, update, amend, and revise the SWPPP, as necessary, to assure compliance with permit requirements. The Contractor shall address in the SWPPP, all non-stormwater discharges that are expected to be associated with the project's construction activities as required by the AZCGP.

The Contractor shall ensure that:

- The SWPPP indicates the areas of the project where the County or other entity has operational control over the project specifications, including the ability to make modifications in specifications.
- All other operators implementing portions of the SWPPP impacted by changes made to the SWPPP are notified of such modifications in a timely manner.
- The SWPPP indicates the parties with day-to-day operational control and parties responsible for implementation of the BMPs identified in the SWPPP.

The Contractor and subcontractors shall ensure that construction activities do not render another party's BMP(s) ineffective.

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The Contractor shall post the SWPPP authorization number(s) in a conspicuous location near the entrance where most of the construction activity is occurring. A copy of the ADEQ authorization certificate shall be retained with the SWPPP. The SWPPP and a copy of the ADEQ authorization certificate shall be retained on the project site at all times during construction. A "Construction SWPPP Checklist" can be obtained from ADEQ for assisting in the preparation of the SWPPP.

107.2.1.5 Inspections: Contractor shall perform inspections, by qualified personnel, of all stormwater pollution control devices on the project at least once every fourteen (14) days and within twenty-four (24) hours of each 0.5-inch or greater storm event, as required under the provisions of the AZCGP. Contractor shall prepare reports, in accordance with the AZCGP, on such inspections and shall retain the reports for a period of at least three (3) years following the completion of the project. The Contractor shall maintain all stormwater pollution control devices on the project in proper working order, which shall include cleaning and/or repair during the duration of the project.

107.2.1.6 NOT Submittal: Upon project completion, acceptance and demobilization, Contractor shall submit to ADEQ a completed, duly executed Notice of Termination form for each NOI issued, with a copy of the NOT acknowledgement letter to appropriate MS4 authority(s), thereby terminating all AZPDES permit coverage for the project. Contractor shall then provide to the County copies of the SWPPP, inspection information and all other documents prepared and maintained by the Contractor in compliance with the AZPDES Construction General Permit, including records of all data used to complete the NOI to be covered by the AZCGP. Contractor shall retain the originals of such documents for a period of at least three (3) years following the completion of the project and make such documents available for inspection by representatives of the Environmental Protection Agency, the Arizona Department of Environmental Quality, the County, and any municipality having jurisdiction, upon request.

107.2.1.7 Fines and Penalties: Fines and penalties imposed by the ADEQ, MS4 authority, or the EPA for Contractor's failure to comply with any of the AZPDES permit requirements and conditions shall be borne by the Contractor. Until paid by the Contractor said fines and penalties may be withheld from monies due or becoming due the Contractor.

107.2.1.8 Payment: The lump sum price for AZPDES shall include all material, labor, and costs relating to the NOI, NOT, and the SWPPP. This includes but is not limited to the preparation, installation, maintenance, and removal of temporary SWPPP elements, assuring proper operation of the pollution control devices installed, and all maintenance, cleaning, and disposal costs associated with clean-up and repair following storm events, runoff or releases on the project. The lump sum price for AZPDES shall be inclusive of all related costs, and no additional claims shall be made by the Contractor under any other specification provision, including changed conditions. Contractor shall be compensated for this item at a rate of 25% of the total contract price paid with the first progress payment, the remaining 75% will be prorated over the entire length of the project.

107.4 ARCHAEOLOGICAL REPORTS, add the following:

If previously unidentified archaeological, historical, or paleontological features are encountered during any activity related to construction of a County project, the Contractor shall stop work immediately at that location and shall notify the Engineer.

107.5 SAFETY, HEALTH AND SANITATION PROVISIONS, add the following:

All water for Contractor's own use, drinking water, temporary electric power, heat, and telephone services shall be provided by the Contractor, at the Contractor's sole expense.

107.6 PUBLIC CONVENIENCE AND SAFETY, add the following:

107.6.3 Control of Airborne Pollutants and Sediment Tracking: Contractor shall cover dump trucks while transporting materials that may become airborne during transit. After dumping of such materials, Contractor shall either cover truck bed or take measures to remove all residues that may become airborne.

Contractor shall minimize off-site tracking of sediments by brushing or blowing off construction vehicles, or any other method deemed appropriate by Contractor, prior to exiting the construction site.

107.6.4 Protective Fencing: The Contractor shall furnish and install 6-foot high temporary chain link fencing, or approved equal, satisfactory to the Engineer, around all major structure construction areas

(i.e., bridges, pump houses, drop structures, retaining walls, etc.) and around any unattended excavations with slopes steeper than 2:1. Temporary fencing shall completely enclose the construction activity and shall be secured after normal working hours to prevent unauthorized access.

SECTION 108
COMMENCEMENT, PROSECUTION AND PROGRESS

108.2 NOTICE TO PROCEED:

Add section 108.1.1 as follows:

108.2.1 Pre-Construction Conference: After execution of the Contract by both parties and prior to the commencement of the work, the Engineer will schedule a pre-construction conference at the facilities of Cochise County. Contractor shall be represented at a minimum by a company official with signature authority on behalf of its organization.

Contractor shall submit to the Engineer during the pre-construction conference the following documents:

(A) List of all subcontractors
(B) List of all material sources
(C) Assumptions and calculations used to determine each of the unit prices
(D) Preliminary work schedule
(E) Traffic control plans
(F) Emergency telephone numbers
(G) Signing authority letter
(H) Name and telephone number of the certified safety professional
(I) Copies of all Permits required for project Construction
(J) Preliminary SWPPP and NOI

The following items shall be submitted at the preconstruction conference when reasonably feasible. When not submitted at the preconstruction conference, the submittal(s) shall be specifically shown in the work schedule. The submittals shall be scheduled at least 45 days prior to intended use and/or material transport to the project site.

(K) Material safety data sheets
(L) Mix designs
(M) (M) Manufacturer's certification for all materials
(N) (N) Shop drawings

The pre-construction conference will cover topics such as critical elements of the work schedule, payment application and the processing of invoices. Additionally, a scheduled start date for the work will be determined.

108.3 SUBLETTING OF CONTRACT, add the following:

The Engineer will not consent to subletting of any portion of the contract if a copy of the subcontract or lower tier subcontract is not received. The Engineer's consent shall in no way be construed to be an endorsement of the subcontractor or its ability to complete the work in a satisfactory manner.

The subcontract, purchase order, or lease agreement shall be evidenced in writing and contain all pertinent provisions and requirements of the prime contract. The following data shall be submitted seven calendar days prior to the start of each subcontractor's work.

(A) A complete copy of each subcontractor agreement and each second-tier subcontractor agreement.
(B) Verification that all required Federal Provisions; i.e., Federal Form 1273, Executive Order, and Wage Determination Decisions are attached to each subcontract in any federal-aid funded contract.
(C) Subcontracts must show the total price subcontracted. The items of work, and quantities of each item subcontracted shall be shown. Unit Prices or Extended Prices may be deleted except in the case of DBE subcontractors.
(D) DBE subcontracts shall include full extensions of all unit prices.
(E) Partial items shall be explained in detail and show the amount of each contract item being

subcontracted. Non-contract item work shall be fully explained.

(F) The contractor shall certify to the County that all of its subcontractors have all required registrations.

108.4 CONTRACTOR'S CONSTRUCTION SCHEDULE, replace with the following:

Contractor shall be solely responsible for the planning, scheduling and execution of the work to assure timely completion of the project.

108.4.1 The initial schedule shall be submitted to the County in triplicate for review at the pre-construction conference. The schedule shall be a schematic (arrow) or precedence diagram, reflecting the work stages and all activities required for the successful completion of the project. The schedule shall show enough detail to allow day to day monitoring of Contractor's operation and shall include major milestone dates for the work.

108.4.2 The schedule shall include a complete critical path schedule and shall include a detailed network diagram with the following elements:

108.4.2.1 Contractor's schedule shall be time scaled in calendar days and all activities shall be recorded from the initial start dates to their completion dates. Unless specific approval was given by the Engineer, the individual activities shall not exceed fifteen (15) calendar days in length. The plot size and scale shall be acceptable to the Engineer.

108.4.2.2 The schedule shall reflect the order and the individual categories for each activity described in section 108.4.2.7, below. Critical activities shall be highlighted by use of color or any other method acceptable to the Engineer.

108.4.2.3 The schedule shall include, in addition to all construction activities, such tasks as mobilization, demobilization, submittal and approval of material samples and shop drawings, procurement of major material and equipment items, fabrication of special items and the installation and testing of such items. The schedule shall also reflect coordination activities with other projects.

108.4.2.4 Activities shall show sufficient detail to allow the reviewer to easily follow the sequence of the work, for example, forming, reinforcing and placement of concrete on the specific calendar days such activities are scheduled.

108.4.2.5 The diagram shall show each activity, the preceding and the following activity, the activity description, the total float time, and the duration of the activity in working days.

108.4.2.6 Activity descriptions on the diagram shall be job-specific and not of a generic nature.

108.4.2.7 In addition to the diagram, Contractor shall submit a schedule report of the network outlining the following data for each activity:

(A) preceding and following event and activity numbers
(B) activity description
(C) activity duration
(D) earliest commencement date
(E) earliest completion date
(F) latest commencement date
(G) latest completion date
(H) total float times
(I) responsible party for specific activity

108.4.3 Contractor shall update its schedule as mandated by the following events or as requested by the Engineer.

108.4.3.1 Contractor shall submit to the County on the tenth (10th) working day of each month a construction progress report (three originals) describing all completed or in progress activities and the level of completion of all activities to date in connection with this project. Detailed information shall be given for all negative float time. If the Engineer determines that any or all parts of the network diagram requires revision, Contractor shall furnish the County with the requested revisions within ten (10) calendar days of such request.

108.4.3.2 The monthly report shall be accompanied by a brief description of the job progress, problems encountered, current and anticipated delaying factors and the potential impact on the project schedule, and a description of corrective measures taken or proposed. It shall also include any departures from

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earlier schedules, including but not limited to, logical sequence or logical ties, constraints, changes in scheduled activities and the duration of such changes, addition or deletion of event numbers, activity numbers and activity descriptions. Contractor shall outline the reason for the departure from the original schedule.

108.4.3.3 All costs and expenses incurred by the Contractor for the preparation of schedules and/or reports and all revisions thereto, are considered an overhead item and therefore not reimbursable as a separate pay item.

108.4.3.4 In addition to allowances for various activities in connection with the work, Contractor shall base the schedule on normal weather conditions and shall incorporate the following factors:

(A) procurement and shipping times for material
(B) concrete curing time
(C) reasonable allowances for relocation of utilities

108.4.3.5 The Engineer's review of the schedule shall not constitute an acceptance of responsibility by the County for the content of the schedule and shall not relieve Contractor of its obligations to commit all its resources to meet the schedule set forth in the specifications. Free float time within the project's stated contract time limit shall remain available for use by the project. The County or the Contractor may use as needed the available project free float time. The Engineer's review of the schedule shall not constitute a basis for additional time to complete the work specified in the scope of work nor shall it serve as basis for additional compensation.

108.4.3.6 In addition to the overall project work schedule, the Contractor shall provide a weekly schedule of his general operations, quality assurance testing, and inspections needs for the next week's operation. Said work schedule is to be submitted at the weekly construction meeting.

108.5 LIMITATION OF OPERATIONS, add the following:

Regular work hours vary depending on time of year, the Contractor shall submit proposed weekday regular work hours at the pre-construction meeting (pre-job conference) for approval. The Contractor shall be subject to additional inspection fees for overtime work when work is performed on weekends, legal holidays, or at times other than the approved regular work hours.

The Contractor shall comply with all local noise ordinances. For unincorporated areas, the Contractor shall not conduct any work during the hours 7:00 p.m. to 6:00 a.m. without the written approval of the Engineer. Special noise abatement conditions and procedures may be required if nighttime work is approved.

Part 200 add the following new Section:

SECTION 202
REMOVAL OF STRUCTURES

202.1 DESCRIPTION:

The work under this Section shall consist of the removal, wholly or in part, and satisfactory disposal of all structures within the right-of-way which have not been designated on the project Plans or specified in the Special Provisions to remain, except for those structures which are to be removed and disposed of under other items of work in the contract. The work shall also include salvaging of designated materials and backfilling the resulting cavities.

Existing structures and other existing improvements which are to become an integral part of the planned improvements shall remain even though not specifically noted.

Materials removed and not designated to be salvaged or incorporated into the work shall become the property of the Contractor.

202.2 BLANK

202.3 CONSTRUCTION:

202.3.1 General: Bridges, culverts, retaining walls, and other structures in use by or facilitating traffic shall not be removed until satisfactory arrangements have been made to accommodate the traffic.

Blasting or other operations necessary for the removal of an existing structure, which may damage new

construction, shall be completed prior to commencing the new work.

Items designated to be salvaged shall be carefully stockpiled or stored by the Contractor at locations designated in the Special Provisions or as requested by the Engineer.

Items which are to be salvaged or reused in the new construction, that are damaged or destroyed as a result of the Contractor's operations, shall be repaired or replaced by the Contractor at no additional cost to the County.

Holes, cavities, trenches and depressions resulting from the removal of major structures, except in areas to be excavated, shall be backfilled with suitable material which shall be compacted to a density of not less than 95 percent of maximum density, as requested and approved by the Engineer.

202.3.2 Removal of Bridges: The removal of existing bridges, either wholly or in part, shall be as shown on the project plans or as described in the Special Provisions. Bridge removal operations shall be conducted in such a manner as to cause the least interference to public traffic.

At least ten days before beginning bridge removal over or adjacent to public traffic or railroad property, the Contractor shall submit to the Engineer details of the removal operations showing the methods and sequence of removal and equipment to be used.

When total bridge removal is specified, all materials designated for salvage, such as structural steel, structural steel members, timber and other reusable materials shall be carefully dismantled, removed and salvaged in accordance with the requirements of Section 202.3.1. Steel members shall be match marked as requested by the Engineer.

Piling, piers, abutments, footings and pedestals shall be removed to at least 1.0 foot below ground line or 5 feet below finished subgrade elevation unless specified otherwise in the Special Provisions or on the project Plans.

When partial bridge removal is specified or alteration of an existing bridge requires removal of portions of the existing structure, such removal shall be performed with sufficient care as to leave the remaining portion of the structure undamaged.

In case of damage to the existing bridge structure, the Contractor shall make necessary repairs at no additional cost to the County. Reinforcing steel extending from the remaining portion of the structure shall be protected, cleaned and incorporated in the new portion of the structure in accordance with the details shown on the project plans or as requested by the Engineer.

Flame cutting and saw cutting may be used for removing, widening, or modifying bridges, provided the Contractor complies with all protection, safety and damage requirements.

Explosives shall not be used in bridge removal operations unless approved by the Engineer.

Before beginning concrete removal, operations involving the removal of a portion of a monolithic concrete element, a saw cut a minimum of 1 inch deep shall be made to a true line along the limits of removal on all faces of the element which will be visible in the completed work.

Removed concrete and other debris shall be disposed of as provided in Section 104.1.4.

202.3.3 Removal of Minor Structures and Miscellaneous Structural Concrete: Minor structures and miscellaneous structural concrete shall be defined as all or portions of minor retaining walls, spillways, drainage structures, concrete box culverts, foundations, footings and all other Portland cement concrete construction, except bridges. All existing miscellaneous concrete shall be removed to a depth of at least 5 feet below finished subgrade elevation, unless otherwise specified in the Special Provisions or on the project plans.

Where new concrete is to join existing concrete, the existing concrete shall be saw cut to a true line with straight planar edges free from irregularities.

Concrete removal operations shall be performed without damage to any portion that is to remain in place. All damage to the existing concrete which is to remain in place shall be repaired to a condition equal to that existing concrete damaged by the Contractor's operations shall be at no additional cost to the County.

Existing reinforcement that is to be incorporated in new work shall be protected from damage and shall be thoroughly cleaned of all adhering material before being embedded in new concrete.

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Removed concrete and other debris shall be disposed of as provided in Section 104.1.4.

The floors of concrete basements, pits, and structures not required to be removed, and which are located within the roadway, shall be broken in a manner that will prevent the entrapment of water.

202.4 MEASUREMENT:

Removal of structures will be measured on a lump sum basis except when the fee schedule contains specific items under this section on a unit basis, measurement will be made by the units designated in the fee schedule.

202.5 PAYMENT:

Payment for the accepted quantities of removal of structures will be made by lump sum, or by specific removal items, or by a combination of both. Payment for removal of structures and obstructions not listed in the fee schedule, but necessary to perform the construction operations designated on the project plans or specified in the Special Provisions, shall be considered as included in the prices of contract items.

The prices shall include all excavation and subsequent backfill related to the removals, and the salvaging, hauling, storing and disposing of all materials as provided herein.

SECTION 205
ROADWAY EXCAVATION

205.1 DESCRIPTION, add the following:

Roadway excavation shall also consist of the placement and compaction of excavated material in embankments as provided under Section 211 Fill Construction.

SECTION 211
FILL CONSTRUCTION

211.2 PLACING, add the following:

Fill material placed within 2 feet of pavement finished grade shall not exceed 3 inches in greatest dimension. Fill material placed within 2 feet of all other finished grades shall not exceed 6 inches in greatest dimension.

Part 200 add the following new Section:

SECTION 212
ROADWAY OBLITERATION

212.1 DESCRIPTION:

Roadway obliteration shall consist of removing abandoned roadway elements and grading the area to blend in with the surrounding terrain. In undeveloped areas, the grading is to restore the natural contours.

212.2 CONSTRUCTION:

The Contractor shall remove existing pavement and base materials. The Contractor shall dispose of materials in fill areas or as approved by the Engineer. Grading and shaping operations shall consist of excavating prior filled areas and the placing of fill material as needed for terrain restoration. The roadway's native subgrade shall be scarified prior to placement of any fill. Fill material in excess of project construction requirements shall be placed in the area of the old roadway and shaped to blend with natural contours according to the obliteration detail or specified grades, to the satisfaction of the Engineer. Compaction of fill in the restored areas shall range between 85% and 90% when tested with methods defined in section 211.4. Care shall be taken to ensure proper drainage. The area shall be seeded in accordance with Section 430 Landscaping and Planting.

212.3 MEASUREMENT:

Measurement of Roadway Obliteration will be the square yards of pavement designated to be removed within roadway obliteration limits.

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212.4 PAYMENT:

Payment for Roadway Obliteration will be at the contract unit price. Payment shall be full compensation for removal of all asphalt pavement and base materials together with the grading and shaping operations, complete in place.

Part 200 add the following new Section:

SECTION 221
GABION CONSTRUCTION

221.1 DESCRIPTION:

The work under this section shall consist of furnishing all materials, equipment, labor, and incidentals required to construct metallic-coated steel wire gabion mattresses or baskets at the locations and to the line and grade shown on the plans.

221.2 MATERIALS:

The material used for gabion fill shall be clean, hard, well-graded rock. The rock size for 12" thick gabion mattresses shall be from 4" to 8" with D_{50} = 6". Placement of stone filling shall not exceed a 12" vertical drop above the gabion mattress.

Rock shall be sound and durable, free from clay or shale seams, cracks or other structural defects. The bulk specific gravity (SSD) shall be determined in accordance with the requirements of AASHTO T-85 and shall be a minimum of 2.4. Rock may be rounded stones. Rock shall have a least dimension not less than one-third of its greatest dimension and a gradation in reasonable conformity with that shown herein. Control of the gradation will be by visual inspection.

The source and acceptability of the stone shall be submitted to the Engineer for approval. If testing is required, suitable sample of stone shall be taken in the presence of the Engineer at least 25 days in advance of the time when its use is expected to begin. The approval of a sample from a particular pit or quarry site shall not be construed as constituting the approval of all material taken from that site.

Gabion basket units shall be of non-raveling construction and fabricated from a double twist by twisting each pair of wires through three half turns developing the appearance of a triple twist per ASTM A975. The double twist mesh shall be manufactured from zinc-5% Al coated steel wire conforming to ASTM A856 Zinc-5% Aluminum-Mishmetal Alloy-Coated Carbon Steel Wire. The nominal diameter of the wire shall be 0.0866 inches for gabion mattresses and 0.120 inches for gabion baskets. The metallic-coated steel wire shall have a zinc-5% Al coating with at least 275 g/m^2 per DIN 1548, as manufactured by Maccaferri Gabions, Inc. (GalMac® wire) or approved equal. All gabion diaphragms and frame wires shall equal or exceed the requirements for Style 3 in ASTM A975. The mesh opening shall be hexagonal in shape and uniform in size measuring not more than 60 mm (2-½ inches) by 80 mm (3-¼ inches) for gabion mattresses. Selvedge or perimeter basket frame wire shall be of a heavier gauge than the mesh wire with a diameter of 0.015 inches after the zinc-5% Al coating. Lacing and connecting wire shall meet the same specifications as wire used in the gabion body except that its diameter shall be 0.091 inches (US gauge 13) after zinc-5% Al coating. The use of alternate wire fasteners shall be permitted in lieu of tie wire providing the alternate fastener produces a four (4) wire selvedge joint with a strength of 1,400 lbs per linear foot while remaining in a locked and closed condition. Properly formed interlocking fasteners shall be spaced from 4 inches to 6 inches and have a minimum 1 square inch inside area to properly confine the required selvedge wires. The interlocking wire fastener shall meet material specification ASTM A-764, Finish 2, Class 1, Type 3. All of the above wire diameters are subject to tolerance limit of 0.004 inches in accordance with ASTM A641.

Bedding material shall be used under and behind the gabion baskets. Bedding material shall be clean and durable, and free from clay, shale, or organic material. Two layers of bedding material shall be used, Type I and Type II, conforming to the following gradations:

GRADATION FOR GRAVEL BEDDING

	Percent Passing by Weight	
Standard Sieve Size	Type I	Type II
3 inches	-	90 to 100
1-1/2 inches	-	-

3/4 inch	-	20 to 90
3/8 inch	100	-
#4	95 to 100	0 to 20
#6	45 to 80	-
#50	10 to 30	-
#100	2 to 10	-
#200	0 to 2	0 to 3

A sample of each type of bedding material shall be provided to the Engineer for approval along with a sieve analysis of a representative sample of each type of bedding material.

The thickness of the gravel bedding shall be 4 inches for both Type I and Type II. Type II bedding shall be placed on top of Type I bedding.

Geotextile filter fabric shall be used behind and under the bedding material and shall be a non-woven fabric consisting only of long-chain polymeric filaments such as polypropylene or polyester formed into a stable network such that the filaments retain their relative position with each other. The fabric shall be inert to commonly encountered chemicals that adversely affect or alter its physical properties. The physical requirements for the geotextile fabric shall meet the following minimum average roll values:

PROPERTY	REQUIREMENT	TEST METHOD
Grab tensile strength, lbs	200	ASTM D 4632
Grab elongation at break, %	45 min., 115 max	ASTM D 4632
Puncture strength, psi	80	ASTM D 3787
Burst strength, lbs	475	ASTM D 3786
Trapezoidal tear strength, lbs	50	ASTM D 4533
Permittivity, cm/sec^{-1}	0.48 maximum	ASTM D 4491
Apparent opening, US Std. sieve size	150-200	ASTM D 4751
UV stability, %	70	ASTM D 4355

Minimum average roll values represent the average test results for a lot in the weaker direction when sampled according to ASTM D 4354 and tested according to the rest method specified above.

The identification, packaging, handling, and storage of the geotextile fabric shall be in accordance with ASTM D 4873. Fabric rolls shall be furnished with suitable wrapping for protection against moisture and extended ultraviolet exposure prior to placement. Each roll shall be labeled or tagged to provide product identification sufficient to determine the product type, manufacturer, quantity, lot number, roll number, date of manufacture, shipping date, and the project number and name to which it is assigned. Rolls will be stored on the site or at another identified storage location in a manner that protects them from the elements. If stored outdoors, they shall be elevated and protected with a waterproof, light-colored, opaque cover. At no time shall the fabric be exposed to sunlight for a period exceeding 14 days.

221.3 ASSEMBLING AND PLACING:

The gabion bed subgrade shall be excavated to the width, line, and grade shown on the plans. The gabions shall be founded on this bed and laid to the lines and dimensions required.

Excavation for toe or cut-off walls shall be made to the neat lines of the wall.

Gabions shall be fabricated in such a manner that the sides, ends, lid, and diaphragms can be assembled at the construction site into rectangular units of the specified sizes. Gabions are to be of single unit construction. The base, ends, and sides shall either be woven into a single unit or one edge, or shall be connected to the base section of the unit in such a manner that strength and flexibility at the point of connection is at least equal to that of the mesh.

Gabion mattress dimensions shall conform to sizes as follows:

DIMENSIONS (ft)	NO. CELLS	CAPACITY (ft^3)
6 x 3 x 1	2	18
9 x 3 x 1	3	27
12 x 3 x 1	4	36
3 x 3 x 3	multiple lengths	27 each

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Tolerances: All gabion dimensions shall be within a tolerance limit of ±5% of the manufacturer's stated sizes.

The Contractor shall submit for review by the Engineer, shop drawings prepared by a Professional Engineer registered in the state of Arizona for the gabion layout at the locations shown in the plans. Said shop drawings will be based on the layout shown on the plans and shall include, but not be limited to plan and sections, basket sizes, and locations.

Where the length of gabion exceeds its horizontal width, the gabion is to be equally divided into cells by diaphragms of the same mesh and gauge as the body of the gabions. The length of the cells shall not exceed the horizontal width of the gabion. The gabion shall be furnished with the necessary diaphragms secured in proper position on the base section in such a manner that no additional tying at this juncture will be necessary.

All perimeter edges of gabions are to be securely selvedged or bound so that the joints formed by tying the selvedges have at least the same strength as the body of the mesh.

Gabions shall be placed to conform with the project plan details. Stone shall be placed in close contact in the unit so that maximum fill is obtained. The units may be filled by machine with sufficient handwork to accomplish requirements of this specification; however, the stone filling shall not exceed a 12-inch vertical drop above the gabion basket. The exposed face or faces shall be hand-placed using stones to prevent bulging of the gabion cell and to improve appearance. Each gabion basket cell shall be filled in three lifts.

Two connecting tie wires shall be placed between each lift in each cell. Care shall be taken to protect the vertical panels and diaphragms from being bent during filing operations.

The last lift of stone in each cell shall be level with the top of the gabion to properly close the lid and provide an even surface for the next course.

All gabion units shall be tied together; each to its neighbor along all contacting edges to form a continuous connecting structure.

Empty gabions staked on filled gabions shall be laced to the filled gabion at the front, side, and back.

Filter fabric shall be placed in the manner and at the locations shown on the project plans. The surface to receive the fabric shall be free of obstructions, depressions, and debris. The filter fabric shall be loosely laid and not placed in a stretched condition.

The strips shall be placed to provide a minimum 24-inch overlap for each joint. On horizontal joints, the uphill strip shall overlap the downhill strip. On vertical joints, the upstream strip shall overlap the downstream strip.

The bedding material shall be carefully placed on the filter fabric in such a manner as not to damage the fabric. If, in the opinion, of the Engineer, the fabric is damaged or displaced to the extent that it cannot function as intended, the Contractor shall remove the bedding material, regrade the area if necessary, and replace the filter fabric.

221.4 MEASUREMENT:

Gabion riprap shall be measured by the cubic yard by computing the volume of the rock-filled wire baskets used.

221.5 PAYMENT:

The accepted quantities of gabion riprap, measured as provided above, will be paid for at the contract unit price, which price shall be full compensation for the work, complete in place, including excavation, preparing the ground area and furnishing and installing the rock, bedding, fabric, and metal items, complete in place.

SECTION 222
CEMENT STABILIZED ALLUVIUM BANK PROTECTION

222.1 DESCRIPTION:

The work under this section consists of constructing cement stabilized alluvium (CSA) bank protection at the locations shown on the plans and in accordance with these specifications, including

excavating, backfilling and grading the river bed and banks to the lines, grades and cross sections shown on the plans or established by the Engineer; furnishing, processing and mixing aggregate, cement, fly ash and water; spreading and compacting the mixture; and placement of curing seal.

222.2 MATERIALS:

222.2.1 Aggregate shall be clean, sound, durable, uniform in quality and free of any soft, friable material, organic matter, oil, alkali or other deleterious substances. Aggregate shall conform to the following requirements.

Aggregate Size	Percent Passing
3 inch	100
No. 4	30-65
No. 200	0-8

Sampling and sieve analysis shall be performed in accordance with ASTM D75 and ASTM C136.

The plasticity index shall be no greater than 10 in accordance with the requirements of AASHTO T-90. Clay lumps larger than one inch shall be screened out of the raw soil prior to mixing.

Before placing aggregates upon the stockpile site, the site shall be cleared of vegetation, trees, stumps, brush, rocks and other debris, and the ground leveled to a smooth, firm, uniform surface.

Stockpiles shall be constructed upon prepared sites. The piles when completed shall be neat and regular in shape. The stockpile height shall be limited to a maximum of 13 feet.

Stockpiles in excess of 200 cubic yards shall be built up in layers not more than 4 feet in depth. Stockpile layers shall be constructed by trucks, "clamshells", or other methods approved by the Engineer. Pushing aggregates into a pile by a bulldozer will not be permitted. Each layer shall be completed over the entire layer of the pile before depositing aggregates in the next layer.

The aggregate shall not be dumped so that any part of it runs down and over the lower layers in the stockpile. The method of dropping from a bucket or spout in one location so as to form a cone shaped pile will not be permitted. Any method of placing aggregates in stockpiles, which, in the opinion of the Engineer, segregates, breaks, degrades or otherwise damages the aggregates will not be permitted.

Only pneumatic tired equipment shall be used on the processed or manufactured aggregates in constructing the stockpiles. When removing materials from the face of the stockpile, the equipment shall be operated in such a manner as to face-load from the floor to the top of the stockpile to obtain maximum homogeneity of materials.

Stockpiles shall not be constructed where traffic, vehicles or Contractor's equipment will either run over or through the stockpile, or cause foreign matter to be mixed with the aggregates.

222.2.2 Cement shall conform to the requirements for low alkali, Type II Portland Cement of Section 725.2.

222.2.3 Fly ash shall conform to the requirements of Section 725.2.1 for pozzolonic materials.

222.2.4 Water used for mixing shall be potable and free from oil, vegetable matter and any other deleterious matter; and shall conform to Section 725.4.

222.2.5 CSA shall have a minimum compressive strength of 0.75 ksi at seven days, determined in accordance with the requirements of Arizona Test Method 241

(Modification of AASHTO T-134). At least one test (two cylinders) shall be made for each 1,300 cubic yards of CSA placed.

222.2.6 Bedding Mortar shall consist of broomable, high portland cement/fly ash content, heavily sanded mortar, with a compressive strength of 2.9 ksi at 28 days, and shall have a slump of approximately 8.0 to 9.0 inches. The sand (fine aggregate) shall satisfy Sections 701.3, 776.3 and the following gradation:

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Aggregate Size	Percent Passing
3/8 inch	100
No. 4	95-100
No. 16	45-80
No. 50	0-30
No. 140	0-10
No. 200	0-4

222.2.7 Exterior Concrete shall be Class B, conforming to Section 725.1.

222.2.8 Forms shall be mortar tight and designed, constructed, braced and maintained so that the finished concrete will be true to line and elevation; and will conform to the required dimensions and contours. They shall be designed to withstand the pressure of concrete, use of set-retarding admixtures or pozzolonic materials in the concrete, effects of vibration as the concrete is being placed and all loads related to the construction operations, without distortion or displacement.

All forms shall be treated with an approved release agent before concrete is placed. Any material that will adhere to or discolor the concrete shall not be used.

222.3 CONSTRUCTION:

222.3.1 Mix Design: Contractor shall determine the mix proportions of the aggregate, cement, fly ash and water; and shall furnish CSA conforming to the requirements specified herein. The job-mix design with supporting test results shall be submitted to the Engineer for review. The Engineers approval shall be obtained prior to incorporating any material into the work.

The mix design objective is to provide the minimum cement plus fly ash content (C+P), W/C ratio and mix proportions to meet the specified strength, plus 2% additional cementitious materials (same C+P content) for durability and material variations. At the same time, the mix shall be dry (stiff) enough to support heavy placement and compaction equipment, yet wet enough to permit effective consolidation by adequate distribution of the paste binder throughout the CSA mass, during the mixing and placing process. The C+P content during CSA production shall not be decreased nor increased from that of the approved job-mix design unless approved by the Engineer. Actual mix designs, used on this project, shall be determined from the Contractor's laboratory tests from material stockpiled after construction of the stockpiles is completed.

The mix design shall be performed in accordance with Arizona Test Method 220 (Determination of Cement Content Required for Cement Treated Mixtures, a modification of AASHTO T-144) to determine the cementitious (C+P) content necessary for the strength required for CSA.

Determination of the optimum moisture content for compaction of the CSA mixture, including the additional 2% cementitious material for durability, shall be in accordance with AASHTO T-134, Method B. The additional 2% cementitious materials shall be a mixture of cement and fly ash in the same proportions as used in the mix design to meet the strength requirement. The total weight of cement replaced by fly ash shall not exceed 15%.

The Contractor shall follow the general provisions in accordance with Arizona Test Method 220 and AASHTO T-99, Method D, with the following exceptions:

The AASHTO T-99, Method D, shall be used in determining maximum dry density, modified to the extent that a rock correction will be calculated to correct for aggregate passing the 3.0-inch and retained on the 5/8 inch sieves. No correction will be used in determining the optimum moisture content.

Included in the job-mix design data shall be the grade of cement, brand of fly ash, and source of aggregate. A new mix design shall be submitted for approval at least two weeks prior to use, any time the Contractor requests a change in materials or proportioning of the materials from that given in the approved mix design.

222.3.2 Preparation of Subgrade: CSA shall be placed on a prepared subgrade shaped to the lines and grades shown on the plans, or be placed on existing CSA. The subgrade shall be compacted to a minimum of 95% of the maximum density in accordance with Section 301.3. When the embankment material is composed predominately of rock such that these compaction procedures will not achieve the required density, the Engineer will determine the amount of compaction required and the adequacy of equipment used to obtain the required compaction.

Immediately prior to placement of the CSA, the subgrade shall be uniformly moistened and maintained in an acceptable condition throughout the placement operation. Soft or yielding subgrade shall be corrected and made stable before construction proceeds. Saturated or submerged subgrade shall remain dewatered a minimum of 48 hours after placement of the CSA.

When CSA is to rest on rock, the rock shall be fully uncovered. The surface of the rock shall be removed to a depth sufficient to expose sound rock. Bedrock shall be roughly leveled or cut to approximate horizontal and vertical steps. Seams in the rock shall be grouted where determined by the Engineer.

When placed on existing CSA, the surface receiving the new CSA shall be cleaned to the satisfaction of the Engineer in the following manner:

After exposing the CSA structure, the surface shall be thoroughly cleaned of all loose materials foreign to the CSA. The surface shall be cleaned by sand-blast or hydro-blast (2.0 ksi maximum) to remove all foreign or loosened particles and hand scaled, if necessary, to provide a clean rough surface, free of loose materials, satisfactory to the Engineer.

The old CSA surface shall be moist at the time of placement and a ¼ inch layer of broomable bedding mortar (2.9 ksi) shall be used between the old and new CSA. A set retarding admixture shall be used in the mortar during hot weather placement.

222.3.3 Mixing, General Requirements: Aggregate, fly ash and cement shall be proportioned and mixed in a central mixing plant, unless otherwise permitted by the Engineer. The plant shall be either the batch mixing type (using revolving blade or rotary drum), or the continuous mixing type. The aggregate fly ash and cement shall be proportioned by weight. Certification for each shipment of cement or fly ash shall be provided to the Engineer.

The fly ash and cement shall be added in such a manner so that they are uniformly distributed throughout the mixing operation.

There shall be safe, convenient facilities for sampling the cement and fly ash in the supply line to the weight hopper or pugmill. The charge in the batch mixer or continuous mixer shall not exceed that which will permit complete mixing of the materials.

The water shall be proportioned by weight or volume and there shall be some means to enable the Engineer to verify the amount of water in each batch or the rate of water flow for continuous mixing. The time of the addition of water or the points where it is introduced into the mixer shall be as approved by the Engineer.

Control of water content in the field shall be accomplished in two ways:

(1) The moisture-density relationship for the CSA shall be determined in accordance with AASHTO T-134, Method B, on a routine basis, or when any significant shift in the gradation or rock content occurs.

(2) The actual moisture content of the mixture at the time of compaction, or shortly thereafter, shall be determined in accordance with ASTM D2216 (oven dry) or AASHTO T 310 (nuclear method), to determine if the optimum moisture content as determined by AASHTO T 134, Method B, is being maintained. Water content in the aggregates is to be continuously monitored and the mixing water shall be adjusted as necessary to maintain proper moisture.

222.3.4 Batch Mixing: The mixer shall be equipped with a sufficient number of paddles of a type and arrangement to produce a uniformly mixed batch. The mixer shall be equipped with a timing device which will indicate, by a definite audible or visual signal, the expiration of the mixing period. The device shall be accurate to within two seconds. The time of mixing shall begin after all the ingredients are in the mixer and shall end when the mixer is half emptied. The allowable tolerance for weight batching of aggregates and cementitious material will be 2.0% and 0.5%, respectively, for each batch.

The batch mixing plant shall provide sampling facilities that are satisfactory to the Engineer and which will allow representative samples of the CSA to be obtained easily and safely.

222.3.5 Continuous Mixing: A control system shall be provided that will automatically close down the plant when the material in any storage facility approaches the strike-off capacity of the feed gate. The plant will not be permitted to operate unless this automatic control system is in good working condition.

The feeder for the aggregate shall be mechanically or electrically driven.

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Aggregate shall be drawn from the stockpile by a feeder or feeders that will continuously supply the correct amount of aggregate.

The cement/fly ash and aggregate feeders shall be equipped with devices that can accurately determine the rate of feed while the plant is in full operation.

Continuous mix plants shall provide sampling facilities which are satisfactory to the Engineer, and that allow representative samples of the aggregate and CSA mixture to be obtained easily and safely.

222.3.6 Transporting/Spreading: Mixed materials shall be transported from the plant to the construction site in vehicles and spread on the prepared subgrade or previously completed CSA. Spreading shall be accomplished by the use of approved motor graders or crawler type equipment. The compacted lifts of CSA shall not exceed 8.0 inch or be less than 4.0 inch in thickness.

Aggregate shall not be mixed or placed when the air temperature is below 45º F in the shade, unless the air temperature is at least 45º F in the next 24 hours. CSA shall not be mixed or placed when the air temperature is greater than 109º F in the shade.

222.3.7 Compacting/Finishing: All completed CSA surfaces that will be covered with succeeding layers of CSA shall be kept continuously moist by fog spraying until placement of next lift.

CSA shall be uniformly compacted to a minimum of 98%, with an average of 100%, of maximum density as monitored by nuclear density tests in accordance with AASHTO T 238 and T 310. Maximum density shall be determined in the lab in accordance with the requirements of AASHTO T 99, Method D, for minus 0.75-inch material only, with rock correction at each density test location according to AASHTO T 224, Section 2.2.2. At least one density test shall be taken for each 460 cubic yards of CSA.

At the start of compaction of each lift, the mixture shall be in uniform, loose condition throughout its full depth. The moisture content shall be as previously specified herein. No section shall be left undisturbed for longer than thirty minutes during compaction operations. Compaction of each lift shall be accomplished in such a manner as to produce a dense surface, free of compaction planes, and shall be completed within one (1) hour from the time water is added to the mixture. After compaction, CSA shall be shaped to the required grades, cross sections and rolled to a reasonably smooth surface. Whenever the Contractor's operation is interrupted for more than two hours, the top surface of the completed layer, if smooth, shall be scarified to a depth of at least 1 inch with a spike-tooth instrument prior to placement of the next lift. The surface, after scarifying, shall be swept using a power broom or other method approved by the Engineer, to completely free the surface of all loose material prior to the placement of the next lift.

At the time of compaction, the moisture content shall not be more than one percent (1%) below optimum and shall not be more than one percent (1%) above optimum when the mean air temperature during construction hours does not exceed 90ºF.

When the mean air temperature does exceed 90º F, or there is a breeze or wind which promotes rapid drying of the CSA mixture, the moisture content shall be increased as needed, at the direction of the Engineer, but shall be less than the amount that will cause the CSA to become unstable during compaction and finishing operations.

Backfill shall not be placed within 40 inches of the top of the CSA surface. Construction joints shall be provided at the end of each day's work or when work is halted for two hours or more. The joints shall be trimmed to a straight line and vertical to the full depth of the lift. Before resuming placement of new material, the joints shall be roughened and loose material removed by power broom or compressed air.

Compaction equipment shall be capable of obtaining specified requirements without detrimentally affecting the compacted material. The equipment shall be modern, efficient compacting units approved by the Engineer. The units shall be of a type that is capable of compacting each lift of material as specified, and meet the minimum requirements as contained herein:

Self-propelled drum drive vibratory roller shall be of a type that will transmit dynamic impact to the surface to be compacted through a steel drum by means of revolving weights, eccentric shaft or other methods. The compactor shall have a gross mass of not less than 23,000 lbs. and shall produce a dynamic force of at least 13 lbs. per inch of drum width when operated at 2,400 cycles per minute (cpm). The dynamic force is defined as the force developed by revolving the eccentric weight at 2,400

cpm. The roller shall have a smooth drum or drums and the drum diameter shall be between 48 inches and 70 inches, and the width shall be between 28 inches and 100 inches. The frequency of vibration during operation shall be 2,400 cpm. The roller shall be operated at speeds not to exceed 15 mph in the forward direction. The engine driving the eccentric mass shall have a rating of not less than 90 kilowatts. Variation in speed, frequency and method of operation will be determined when found necessary to secure maximum compaction of materials.

Heavier compacting units may be required to achieve the required density.

222.3.8 Bedding Mortar: Bedding Mortar shall be used between CSA that has been in place more than seven (7) days and the new CSA after the existing CSA has been properly cleaned. The bedding mortar is to be used for achieving bond between the old and new CSA layers and to eliminate and prevent segregation or voids along the margins of CSA placements. Adjustment to the mix design may be required by the Engineer.

222.3.9 Control Strips: A control strip shall be constructed at the beginning of work on the CSA to be compacted. The control strip construction will be required to establish procedures necessary to obtain densities for the specific course plus use of portable nuclear moisture/density testing equipment to determine in-place densities.

Each control strip, constructed to acceptable density and surface tolerances shall remain in place and become a section of the completed CSA. Unacceptable control strips shall be corrected or removed and replaced at the Contractor's expense. A control strip shall cover an area of approximately 420 square yards and be of the same dimensions specified for the CSA course.

The materials used in construction of the control strip shall conform to the specification requirements. They shall be furnished from the same source and be of the same type as used in the CSA. The underlying surface for the control strip shall have prior approval of the Engineer.

The equipment used in the control strip shall be of the same type and weight as used for the CSA.

Compaction of control strips shall start immediately after the course has been placed to the specified thickness, and shall be continuous and uniform over the entire surface. Compaction of the strip shall continue until no discernible increase in density can be obtained by additional effort.

Upon completion of compaction, the mean density of the control strip will be determined by averaging the results of ten density tests taken at random sites within the strip. If the mean density of the control strip is less than 98% of the laboratory compacted specimens as determined by testing procedures appropriate for the material being placed, the Engineer may order the construction of another control strip.

A new control strip may be ordered by the Engineer, or requested by the Contractor when:

(1) A change in material or mix design.

(2) There is reason to believe that the control strip density is not representative for the material being placed.

(3) Ten days of production have passed without a new control strip.

222.3.10 Power Tampers and Small Vibratory Rollers: Small vibratory rollers that are capable of operating within a few millimeters of a vertical face shall be used for compaction adjacent to guide banks, next to utilities and drainage conduit, at transitions to previously constructed levee protection and at other areas where larger vibratory rollers cannot maneuver. The dynamic force produced by the small vibratory rollers shall be at least 140 lbs. per inch of drum width.

Tampers shall be a type capable of developing a force per blow of at least 1390 lbs. The amount of rolling and tamping required shall be whatever is necessary for the particular equipment to provide the same degree of compaction as would be obtained by four passes of the large self-propelled vibratory roller. Standby replacement equipment shall be available within one hour if needed.

222.3.11 Curing: Temporarily exposed surfaces shall be kept continuously moist. Care must be exercised to ensure that no curing material other than water is applied to the surface that will be in contact with succeeding layers.

Permanently exposed surfaces shall be kept in a moist condition for seven days, or they may be

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covered with bituminous or other suitable curing material, subject to the Engineer's approval. Any damage to the protective covering within the seven days shall be repaired to the satisfaction of the Engineer.

Regardless of the curing material used, any permanently exposed surface shall be kept moist until the protective cover is applied. This protective cover is to be applied as soon as practical, with a maximum time limit of twenty-four hours between the finishing of the surface and the application of the protective cover.

222.3.12 Maintenance: The Contractor will be required, within the limits of the contract, to maintain the CSA and curing seal in good condition until the work is completed and accepted. Maintenance shall include repairs to any defects that may occur. This work will be done at the Contractor's expense and repeated as often as necessary. Faulty work shall be replaced for the full depth of the layer.

222.4 MEASUREMENT:

The work will be measured by the cubic yard of completed CSA bank protection constructed to the lines, grades and cross-sections shown on the plans.

The maximum limit for the placement of CSA due to over excavation or sloughing of existing soils shall be 4 inches. Any placement beyond these limits will not be included in the pay quantity.

222.5 PAYMENT:

The accepted quantities of CSA will be paid for at the contract price per cubic yard for CSA Bank Protection, subject to the following penalties for failure to achieve the required strength requirements:

Percent of Specified Strength	Percent of Contract Unit Price
100	100
97-99	92
94-96	85
90-94	77
85-89	68
80-84	60
75-79	50
<75	See Note

Note: Material represented by lots attaining seven day compressive strengths with a mean value less than 75% of the specified compressive strength will be evaluated as to acceptance. The Engineer will determine if the material can be left in place or removed and replaced at the Contractor's expense.

Part 300 add the following new Section:

SECTION 308
STABILIZATION USING LIME SLURRY WITH FLY ASH

308.1 DESCRIPTION:

This section shall consist of constructing a mixture of soil, lime slurry, fly ash and water for the stabilization of soils or base materials. The work shall be performed in conformity with the lines, grades, thickness, and typical cross sections shown on the plans.

308.2 MATERIALS:

308.2.1 Soil or Subgrade: The soil or subgrade material used for this work shall consist of materials on the site or imported and shall be free of roots, sod, weeds, and stones larger than 3 inches.

308.2.2 Quicklime and Hydrated Lime: Lime used to manufacture the Commercial Lime Slurry specified herein, shall be either Quicklime or Hydrated lime and shall conform to the requirements of ASTM C977. Lime may only be used in the production of lime slurry. The direct use of dry hydrated lime

or quicklime to the soil material is strictly prohibited. All lime shall come from a single source. If a source change is requested, a new mix design shall be submitted using lime from the proposed new source. The new design must be approved by the Engineer prior to use.

308.2.3 Commercial Lime Slurry: Commercial lime slurry shall be a pumpable suspension of solids in water. The water or liquid portion of the slurry shall not contain dissolved material in sufficient quantity naturally injurious or objectionable for the purpose intended. The solids portion of the mixture, when considered on the basis of solids content, shall consist principally of hydrated lime of a quality and fineness sufficient to meet the following requirements as to chemical composition and residue.

(A) Chemical Composition: The solids content of the lime slurry shall consist of a minimum of 90 percent by weight, of calcium and magnesium oxides (CaO and MgO), as determined by ASTM C25.

(B) Residue: The percent by weight of residue retained in the solids content of lime slurry shall conform to the following requirements:

Residue retained on a No. 6 sieve	Max. 0.2%
Residue retained on a No. 30 sieve	Max. 4.0%

(C) Grade: Commercial lime slurry shall conform to a dry solids content as approved by the Engineer.

A certificate of compliance and a field summary of lime slurry produced shall be provided to the Engineer for each load of slurry.

308.2.4 Water: Water used for mixing or curing shall be reasonably clean and free of oil, salt, acid, alkali, sugar, vegetable, or other substances injurious to the finished product. The pH (hydrogen ion concentration) of water to be used during construction for mixing or curing shall be within the range of 6.0 to 8.5. The procedure for determining pH values shall be based on the test apparatus used, the test apparatus may use either an electrometric or colorimetric method. The testing procedure shall be in accordance with the methods and instructions furnished by the manufacturer of the test apparatus. Water known to be of potable quality may be used without testing.

308.2.5 Fly Ash: Fly ash shall meet the requirements of AASHTO M-295, Class C.

308.3 MIX DESIGN:

Before commencing lime / fly ash treatment work, the Contractor shall submit for approval by the Engineer, a proposed mix design. A testing laboratory under the direction and control of an Arizona registered Professional Engineer shall prepare the proposed mix design. The mix design shall be determined using the soils or subgrade material to be stabilized, water from the source to be used during construction, and lime and fly ash from the proposed suppliers. The mix design shall identify the water source to be used during construction and, if not from a potable source, the water's pH value.

The mix design shall determine the following:

- Percent of fly ash and rate of application.
- Percent of lime and rate of application of lime slurry in the treated soil or subgrade material.
- Optimum water content during mixing, curing and compaction.
  Gradation of in-situ mixture after treatment.
- Additional mixing or equipment requirements.
  Mellowing time requirements, if needed.

The mix design shall comply with the following requirements:

- Plasticity Index: Less than 3, per AASHTO T-89 & 90.
- Swell Potential: One (1) percent or less vertical expansion of an air-dried soil when inundated with water and allowed to swell at a confined pressure of 60 psi.
- Unconfined Compressive Strength: Minimum 300 psi in five days curing at 100 degrees F when tested in accordance with ASTM D1633 Method A.

308.4 CONSTRUCTION:

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308.4.1 General: The completed subgrade shall consist of a uniform lime / fly ash mixture, free from loose segregated areas, have a uniform density and moisture content, and be well bound for its full depth. A smooth surface suitable for placing subsequent courses is required if pavement is to be placed directly on the treated subgrade.

Prior to beginning stabilization, the subgrade shall be constructed and brought to grade and shall be shaped to conform to the typical sections, lines, and grades as shown on the plans.

When the design requires treatment to a depth greater than 12 inches, the subgrade soil shall be treated in equal layers. The top layer(s) of soil shall be removed and stockpiled. The lower layer of soil to be treated shall then be treated and allowed to cure in place. After final mixing, the lower layer shall be compacted in maximum 12 inch compacted lifts. The stockpiled soil shall then be placed, treated, mixed and compacted in successive maximum 12 inch compacted lifts.

308.4.2 Weather Limitation: Lime slurry / fly ash treated subgrade shall not be constructed if the atmospheric temperature is below 40□ F or when conditions indicate that temperatures may fall below 40□ F within 24 hours.

308.4.3 Equipment: Contractor shall provide all equipment necessary to complete the work, including grading and scarifying equipment, lime slurry spreader (gravity feed spreaders will not be permitted), fly ash spreader, mixing and pulverizing equipment, sheepsfoot and pneumatic rollers, sprinkling equipment, and trucks. When using dry hydrate to make slurry, agitators are mandatory in spreader. All equipment used for this work shall be subject to approval by the Engineer.

308.4.4 Application: Lime slurry and fly ash slurry shall be spread only on that area where the mixing operations can be completed during the same working day. The application and mixing of lime and fly ash with the soil shall be accomplished by the methods hereinafter described as Slurry Placing.

Slurry Placing: Fly ash shall be spread with trucks equipped with an approved distribution system on the prepared subgrade at the rate specified by the job mix design in a single pass, just prior to the application of the lime slurry. The fly ash may be added to the lime slurry and placed together, if approved by the Engineer. Lime slurry / Lime slurry fly ash, shall be mixed in a portable mixing unit and spread with trucks equipped with an approved distribution system as a slurry. Commercial lime slurry shall be applied with a lime percentage not less than specified herein. The distribution of lime slurry shall be attained by successive passes over a measured section of subgrade until the proper amount of lime has been spread, as determined in the job mix design. The rate of application shall be verified using ASTM D3155 methods.

Thickness: The thickness of the lime slurry treated subgrade shall be determined by visual inspection and/or by depth tests taken at intervals so that each test shall represent no more than 1000 square yards per layer, if more than one layer. The method used to remove material to determine depth of lime treatment may be by shovel and/or pick, coring or other method approved by the Engineer. Phenolphthalein solution shall be used to detect the presence of lime. When the grade deficiency is more than 1 inch, the Contractor shall correct such areas in a manner satisfactory to the Engineer. Contractor shall replace, at no cost to the Agency, the material where depth tests are taken.

No traffic other than the mixing equipment will be allowed to pass over the spread of lime slurry until after completion of mixing.

308.4.5 Mixing: The full depth of the treated subgrade shall be mixed with an approved mixing machine. The use of disc plows or blades are prohibited except in areas specified by the engineer. To ensure a complete chemical reaction of the lime, fly ash and soil or subgrade, water shall be used as required to maintain a moisture content at or above the optimum prior to beginning compaction and held above optimum during compaction. During the interval of time between application and mixing, lime that has been applied, unmixed and exposed to the open air for 10 hours or more will not be accepted.

After mixing and prior to compaction, clay lumps shall meet the following criteria:

	Percent
Minimum of clay lumps passing 1½ inch sieve	100
Minimum of clay lumps passing No. 4 sieve	60

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308.4.6 Compaction: Compaction of the mixture shall begin after final mixing. Sheepsfoot or segmented steel rollers shall be used during initial compaction. Steel wheel or pneumatic tired rollers shall be used only during final compaction, if pavement is to be placed directly on the treated subgrade. Areas inaccessible to rollers shall be compacted to the required density by methods approved by the Engineer.

The material shall be aerated or watered as necessary to provide and maintain required moisture content. The field density of the compacted mixture shall be a least 95 percent of the maximum density at 0-4 percent above optimum moisture. A composite of treated soil or subgrade materials from a minimum of five (5) random locations, per soil type, within the area to be stabilized shall be used to determine the maximum density and optimum moisture content in accordance with ASTM D558. The in-place field density shall be determined in accordance with ASTM D1556, ASTM D2167 or ASTM D2922.

After each section is completed, tests will be made by the Engineer. If the material fails to meet the density requirements, it shall be reworked to meet requirements.

If pumping subgrade should become evident at any time prior to paving, the Engineer may require proof rolling with a pneumatic-tire roller or other approved equipment in order to identify the limits of the unacceptable area. The proof rolling will be performed at no additional cost to the Contracting Agency.

All irregularities, depressions, or weak spots which develop shall be corrected immediately by scarifying the areas affected, adding or removing material as required, and reshaping and compacting. The surface of the course shall be maintained in a smooth condition, free from undulations and ruts. Compaction and finishing shall be done in such a manner as to produce a smooth dense surface free of compaction planes, cracks, ridges, or loose materials.

Throughout this entire operation, the shape of the course shall be maintained by blading, and the surface upon completion, shall be smooth and shall conform with the typical section shown on the plans and to the established lines and grades. Should the material, due to any reason or cause, lose the required stability, density, and finish before the next course is placed or the work is accepted, it shall be recompacted and refinished at no cost to the County.

308.4.6.1 Tolerances: At final compaction, the lime, fly ash and water content for each course of subgrade treatment shall conform to the approved mix design with the following tolerances.

Material	Tolerance
Lime	+0.5% of design, (ASTM C114)
Fly Ash	±1.0% of design, (ASTM C114)
Water	+4%, -0% of optimum, (ASTM D698)

308.4.7 Finishing and Curing: After the final layer or course of lime slurry / fly ash treated subgrade has been compacted, it shall be brought to the required lines and grades in accordance with the plans. The completed section shall then be finished by rolling with a pneumatic or other suitable roller.

The final layer of lime slurry / fly ash treated subgrade shall be maintained in a moist condition until the next layer of pavement structure is placed. If required, a fog seal for curing, in compliance with Section 333, shall be furnished and applied to the surface of the final layer of the lime stabilized material as soon as possible after the completion of final rolling and before the temperature falls below 40□ F. Curing seal shall be applied at a rate between 0.10 and 0.20 gallons per square yard of surface. The exact rate will be determined by the Engineer.

After curing begins, all traffic, except necessary construction equipment shall be kept off the lime slurry / fly ash stabilized subgrade for a minimum of 7 days or until the final pavement structure layer(s) are placed.

308.4.8 Maintenance: The Contractor shall maintain, at his / her own expense, the entire lime slurry treated subgrade in good condition from the start of work until all the work has been completed, cured, and accepted by the Engineer.

308.5 MEASUREMENT:

The quantity of lime slurry / fly ash treated soils shall be measured by the square yard, measured in place, treated, compacted, to the proper depth, and accepted.

The quantity of curing seal shall be measured by the ton, diluted.

308.6 PAYMENT:

The lime slurry / fly ash treated soils measured as provided above will be paid for at the contract price per square yard, which price shall be full compensation for the item complete in place, as herein described and specified.

Payment for curing seal will be made at the contract price per ton for Fog Seal (Contingent Item) based on the rate of application as requested by the Engineer.

SECTION 310
PLACEMENT AND CONSTRUCTION OF AGGREGATE BASE COURSE

310.5 PAYMENT, replace with the following:

Payment for aggregate base course will be paid at the contract unit price per cubic yard for the type involved, complete in place.

SECTION 317
ASPHALT MILLING

317.2 CONSTRUCTION REQUIREMENTS, add the following:

Asphalt milling adjacent to valley gutters or curb and gutter shall include removal and disposal of built-up asphalt concrete, slurry seal, microsurfacing and similar materials from adjacent concrete valley gutters or concrete gutter pans.

317.3 MEASUREMENT AND PAYMENT, add the following:

Removal and disposal of built-up materials from adjacent portland cement concrete surfaces shall not be measured; the associated cost shall be included in the contract unit price for Asphalt Milling.

SECTION 321
PLACEMENT AND CONSTRUCTION OF ASPHALT CONCRETE PAVEMENT

321.8.2 Joints, add the following:

Longitudinal joints shall be located to maintain a minimum 6-inch clear distance from the edge of any proposed longitudinal pavement stripe.

321.8.6 Asphalt Concrete Overlay, replace paragraphs (a) and (b) with the following:

(a) Areas designated for pavement repair or surface replacement by the contract documents (which may include localized pavement failures, severely raveled areas, severely cracked areas, over-asphalted areas, and other defects) shall be cut out and replaced. Pavement repairs and surface replacements shall be completed and approved before placing asphalt concrete overlay.

(b) Before placing asphalt concrete overlay, thermoplastic pavement markings and raised pavement markers shall be removed and milling shall be completed. Milling shall be as shown on the plans or specified in the special provisions in accordance with Section 317.

321.10.1 Acceptance Criteria, replace the third sentence with the following:

When the quantity of asphalt concrete placed in a day exceeds 1000 tons but is less than 2000 tons, the day's production will be divided into two (2) approximately equal sublots. Where the quantity of asphalt concrete placed in a day exceeds 2000 tons, the day's production will be divided into three (3) approximately equal sublots. A minimum of one sample will be obtained from each lot.

321.13 PAYMENT, add the following:

Payment for removal of thermoplastic markings and raised pavement markers prior to roadway overlay operations will be as specified in Section 460.

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Payment for asphalt pavement replacement and asphalt pavement repair required prior to roadway overlay operations will be as specified in Section 336.

SECTION 325
PLACEMENT AND CONSTRUCTION OF ASPHALT-RUBBER ASPHALT CONCRETE

325.7 PLACEMENT:

325.7.2 Placing and Construction Methods, add the following:

Longitudinal joints shall be located to maintain a minimum 6-inch clear distance from the edge of any proposed longitudinal pavement stripe.

325.7.3 Compaction:

Delete the phrase "any desired" from the first sentence.

325.7.5 Adjustments, add the following:

When the Engineer determines an insufficient amount of material is available for shoulder adjustment, the Engineer may require the Contractor to provide additional material.

325.8 QUALITY CONTROL, add the following:

Requests for an Engineering Analysis or Referee Testing as described in 325.9.4 and 325.10 will not be considered unless based on quality control test results by an AMRL and CCRL accredited laboratory using properly certified technicians in accordance with ASTM D3666, Section 7 (Personnel Qualifications).

325.9 ACCEPTANCE:

325.9.1 Acceptance Criteria, replace the third sentence with the following:

When the quantity of ARAC placed in a day does not exceed 1000 tons, the day's total production shall be considered as a single sublot. When the quantity of ARAC placed in a day exceeds 1000 tons but is less than 2000 tons, the day's production shall be divided into two (2) approximately equal sublots. Where the quantity of ARAC placed in a day exceeds 2000 tons, the day's production shall be divided into three (3) approximately equal sublots.

325.9.2 Gradation and Binder Content, replace the first paragraph with the following:

Acceptance testing for gradation and binder content will be performed in accordance with section 325.9.2.2 End Product Sampling and Testing.

325.9.2.2.1 Mineral Aggregate Gradation and Binder Content, add the following:

The Engineer may run tests to determine the correction factor to be used with AASHTO test procedure T 308. When requested by the Engineer, the contractor shall provide calibration materials to the Engineer.

325.9.6 Engineering Analysis (EA), replace Table 325-4 with the following:

TABLE 325-4

ENGINEERING ANALYSIS PENALTIES for REMOVAL* LOTS/SUBLOTS LEFT IN-PLACE

Acceptance Criteria	Acceptance Limits	Penalty When Contracting Agency is the Owner ($/Ton)
Asphalt-Rubber Binder Content	Over 0.2% points from that Permitted	$9.00
Laboratory Air Voids (Measured at 75 blows)	Deviation from Target Greater Than ± 4.0%	$7.50

325.12 PAYMENT, add the following

Payment for removal of thermoplastic markings and raised pavement markers will be as specified in Section 460.

Payment for asphalt pavement replacement and asphalt pavement repair will be as specified in Section 336.

SECTION 329
TACK COAT

329.1 DESCRIPTION, add the following:

Emulsified asphalt for tack coat shall be grade SS-1h.

SECTION 330
ASPHALT CHIP SEAL

Section 330 is supplemented with the following:

330.2.1 ASPHALT:

The type of bituminous material shall be CRS-2. Application shall be at the rate of 0.40 – 0.45 gallons per square yard unless otherwise specified by the County Engineer.

330.2.2 AGGREGATE:

The stone chips shall fully comply with Section 716 except precoating is not required. The first layer of chips shall comply with Table 716-2 and the second layer of chips shall comply with Table 716-1. The chips shall be clean. Application shall be at the rate of approximately 20 pounds per square yard for first layer and 26 pounds per square yard for the second layer unless otherwise specified by the County Engineer.

If moist chips are used, the total moisture content shall not exceed 1.5%. It is the responsibility of the Contractor to determine that the asphalt binder is compatible with the aggregate. Certified weigh tickets for aggregate are required.

330.3 TIME OF APPLICATION AND WEATHER CONDITIONS:

Chip seals shall not be placed between the dates of October 1 and April 1 unless cold weather bituminous material is used and prior approval obtained from the County Engineer. The chip seal shall not be applied unless the pavement temperature or ground surface temperature of the area to be chipped, measured in the shaded area, is at least 65° F and rising.

The roadside drainage ditches and shoulders shall be constructed, and compaction tested prior to placement of chip seal course(s).

330.4. PREPARATION OF SURFACES:

A Tack Coat is not required prior to chip sealing on base course.

The surface shall be uniformly smooth, firm, true to grade and cross section, free from ruts or irregularities, tightly bound, and free from any loose stone or debris and shall be so maintained throughout the placing of the bituminous treatment. In no event shall chip sealing be placed on a soft, uneven base. Any holes, depressions or irregularities shall be repaired. All loose and unsuitable material shall be removed and replaced by suitable material, which shall be compacted to produce a dense surface conforming to the adjacent area. Uniformity of surface texture is of the utmost importance. The base course may not vary by more than ¼ inch above or below required grade and cross-section. Any divots deeper than ¼ inch and greater than 4 square inches shall be filled in, leveled and recompacted prior to chip sealing.

Contractor should lightly blade, water and compact the base with an 84-inch smooth drum steel wheel roller immediately prior to chip sealing. In dry areas, additional light applications of water may be required prior to the application of the bituminous material to facilitate penetration of the bituminous material.

330.4.2 APPLICATION OF BITUMINOUS MATERIAL:

The quantity of asphalt shall be between 0.40 and 0.45 gals. /sq. yd. or as specified by the County Engineer based on temperature variables at the time of application.

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330.4.3 APPLICATION OF COVER MATERIAL:

The application rate shall be 20 lbs/sq.yd. for the first layer and 26 lbs/sq. yd. for the second layer.

330.4.4 ROLLING:

In residential areas, rollers shall be skirted so that any cover material that should stick to the tires during rolling will be thrown back down to the pavement instead of outward into neighboring property.

Sufficient operational self-propelled pneumatic-tired rollers, with operators, shall be provided to accomplish the required embedment of the cover material. If Contractor is working at more than one location, there shall be a minimum of three rollers, with operators, at each location.

Sufficient rollers shall be used for the initial rolling to cover the width of the aggregate spread with one pass. The first pass shall be made immediately behind the cover material spreader. Four complete passes with rollers shall be made and all rolling completed within one hour after the application of the cover material. If the spreading is stopped for an extended period, the cover material spreader shall be moved ahead or off to the side so that all cover material can be immediately rolled.

330.4.5 JOINTS:

Paper shall be used at the beginning and end of the chip seal section to make a smooth, straight, clean transition. Paper shall also be used at concrete crossings.

330.4.6 SURPLUS AGGREGATE REMOVAL:

Contractor is responsible for locating and acquiring areas to stockpile materials and equipment needed for construction. Contractor shall obtain a letter of release from the property owner prior to stockpiling/equipment storage. The cost of material stockpiling, equipment storage and cleanup is incidental to the project. Contractor shall conduct all sweeping operations in the same direction of traffic flow.

For double chip seal construction modest amounts of excess chips that have been evenly placed on the first layer do not need to be removed from the first layer before application of the second layer.

Before final acceptance by the County, all private or public property and grounds occupied by the Contractor in connection with the work shall be cleaned of all rubbish, excess materials, temporary structures and equipment. All parts of the work area shall be left in a condition equal to, or better than, it was prior to the start of the project.

Cleanup shall also include the daily removal of chip seal materials from manhole covers, valve covers, fire hydrant markers, gutters, curbs, sidewalks, etc. in the project area.

Contractor shall keep driveways and sidewalks clean of any loose chips, in residential areas, daily during construction.

330.4.7 PERFORMANCE:

The completed chip seal shall leave a homogeneous mat, adhere firmly to the prepared surface, and have a skid resistant surface texture. Areas of the chip seal mat where the old road surface is exposed, or areas where asphalt binder lies uncovered by chips, shall be filled in by the Contractor with asphalt binder and cover material and rolled.

330.6 MEASUREMENT:

Chips will be measured by the square yard of area to be chipped per plan dimensions.

330.7 PAYMENT: is revised with;

(B) Chips:

Single Chip Seal - Square yard

Double Chip Seal - Square yard

SECTION 333
FOG SEAL COATS

333.1 DESCRIPTION, add the following:

Fog seal coats for curing seal purposes as specified in Section 308 or Section 309 shall consist of the application of emulsified asphalt.

333.6 APPLICATION OF ASPHALT EMULSION, add the following:

For curing seal applications over Lime Slurry Stabilization or Lime Slurry with Fly Ash Stabilization the application rate shall be between 0.10 to 0.20 gallons per squareyard.

SECTION 336
PAVEMENT MATCHING AND SURFACE REPLACEMENT

336.2 MATERIALS AND CONSTRUCTION METHODS

336.2.3 Temporary Pavement Replacement, add the following:

Temporary pavement replacement that uses cold-mix asphalt concrete shall be replaced no later than seven (7) calendar days after initial placement.

336.2.4 Permanent Pavement Replacement and Adjustments, add the following:

336.2.4.3 Pavement Repair: Areas designated for pavement repair are suspected subgrade failure areas within asphalt pavement. Pavement repair consist of removal of the existing pavement structural section (asphalt pavement and the underlying aggregate base), exposing and then removal of subgrade material to a depth of eight inches (8"), backfill and compact subgrade and aggregate base materials to depths as directed by the Engineer, and replacement of the asphalt pavement. The Engineer may revise the removal boundary limits at any time during this work. The Engineer shall be notified and given the opportunity to inspect the soil conditions when the subgrade is exposed prior to excavating subgrade material and again at the completion of subgrade excavation.

After approval of the excavation by the Engineer, the Contractor shall proceed with placement of subgrade and aggregate base materials to elevations directed by the Engineer. Compaction of subgrade and aggregate base shall comply with requirements of Table 601-2. The aggregate base material placed shall be compliant with section 702 requirements; the removed aggregate base may or may not be compliant. After placement of the aggregate base course to the bottom of the adjacent pavement, sawcut and remove asphalt pavement to one foot back of the newly placed aggregate base and then construct new asphalt pavement matching the adjacent existing grades and slopes. Asphalt pavement shall be constructed in accordance with the Section 336.2.4.1 Permanent Asphalt Pavement Replacement, except application of a seal coat is not required.

336.3 TYPES AND LOCATIONS OF TRENCH SURFACE REPLACEMENT, add the following:

Type B trench repair is not approved for use within County right of way.

336.5 PAYMENT, add the following:

Payment for asphalt pavement repair shall be full compensation for all labor, equipment, and materials required for the complete in place repair including but not limited to pavement removal, excavation, aggregate base coarse placement, and asphalt pavement replacement.

SECTION 337
CRACK SEALING

Replace SECTION 337 CRACK SEALING with the following:

SECTION 337 CRACK SEALING AND FILLING

337.1 DESCRIPTION:

This work consists of furnishing and placing sealant or filler material in Contractor prepared cracks and joints of asphalt concrete or portland cement concrete pavements. All cracks and joints, including the space between asphalt concrete pavement and concrete curb and gutter, which have a clear opening of one-quarter inch (¼") or greater, shall be sealed for the length of the crack that equals or exceeds one-eighth inch (⅛") in width.

337.2 MATERIALS:

337.2.1 Material for Category 1 Cracks: Cracks and joints which have a clear opening ranging from one-quarter inch (¼") to one and one-half inches (1½") shall be classified as category 1 cracks. Sealant materials for category 1 cracks shall be a premixed, single component mixture of asphalt cement, aromatic extender oils, polymers, and granulized rubber in a closely controlled manufacturing process. Materials shall conform to the following specifications when heated in accordance with ASTM D5078 and the manufacturer's maximum safe heating temperature.

TEST	REQUIREMENT
Cone Penetration (ASTM D5329)	20-40
Resilience (ASTM D5329)	30% Minimum
Softening Point (ASTM D113)	210°F (99°C) Minimum
Ductility, 77°F (25°C) (ASTM D113)	30 cm Minimum
Flexibility (ASTM D3111 *Modified)	Pass at 30°F (-1°C)
Flow 140°F (60°C) (ASTM D5329)	3 mm Maximum
Brookfield Viscosity 380°F (193°C) (ASTM D2669)	90 Poise Maximum
Asphalt Compatibility (ASTM D5329)	Pass
Bitumen Content (ASTM D4)	60% Minimum
Tensile Adhesion (ASTM D5329)	400% Minimum
Maximum Heating Temperature	400°F (204°C)
Minimum Heating Temperature	380°F (193°C)
Flash Point (ASTM D92)	450°F Minimum

*Specimen bent 90° over a 1-inch mandrel within 10 seconds.

337.2.2 Material for Category 2 Cracks: Cracks and joints which have a clear opening ranging from one and one-half inches (1½") to three inches (3") shall be classified as category 2 cracks. Filler material for category 2 cracks shall be hot applied, pourable, high bonding mastic for application in unconfined areas and for vertical-side recessed configurations. Upon curing the material shall provide a flexible waterproof seal. The material shall be traffic ready in thirty minutes or less when installed in accordance with the manufacturer's instructions. Material for sealing category 2 cracks shall be Deery brand Level & Go Repair Mastic or approved equal.

337.2.3 Material for Category 3 Cracks: Cracks and joints which have a clear opening greater than three inches (>3") shall be classified as category 3 cracks. Material for filling category 3 cracks shall be asphalt concrete 3/8" marshal mix compliant with Section 710 and have 100% of the aggregate passing the 3/8" sieve.

337.2.4 Product Submittals: Prior to application of category 1 crack sealant and category 2 crack filler material, the Contractor shall submit the material manufacturer's product specifications together with installation recommendations which shall include surface preparation, product installation, and curing requirements. Certification of compliance for sealant material shall be submitted. Asphalt mix design for category 3 crack filler material shall be submitted to the Engineer for approval.

The Engineer may request material samples for testing, prior to and during production, to verify the quality of the materials and to ensure conformance with the applicable specifications.

337.3 CLEANING AND PREPARING CRACKS OR JOINTS:

Immediately prior to application of sealant, all cracks and joints shall be cleaned of debris and dust. Cracks and joints shall be vacuumed during final cleaning.

337.3.1 Routing: When specified, narrow cracks shall be routed to create a sealant reservoir. Cutting shall remove at least ⅛" from each side and produce vertical, intact surfaces with no loosely bonded aggregate. Routing of joints and cracks shall produce a reservoir having a nominal size of ¾" wide by ¾" deep. Variations from the nominal size are subject to acceptance or rejection at the engineer's discretion

337.3.2 Vacuuming: Final cleaning shall thoroughly clean cracks and joints to a minimum depth of 1" for cracks that are ¾" or narrower and to the full asphalt depth for cracks that are wider than ¾". Surfaces are to be inspected to assure adequate cleanliness and dryness.

High pressure 90 psi minimum, dry oil free compressed air shall be used for final cleaning and dust removal from cracks. The high-pressure tool shall be integral with a vacuum unit to collect the dust and residue. Both sides of the crack or joint shall be cleaned.

337.4 APPLICATION OF CATEGORY 1 CRACK SEALANTS:

337.4.1 Weather: In no case shall sealant be placed during damp roadway conditions such as wet roadway surfaces or damp material inside the cracks. Operations stopped by the Engineer, due to weather, shall be at no additional cost to the contracting Agency. If installing at night, ensure that dew is not forming on the pavement surface.

Sealant material shall only be applied when pavement temperature exceeds 40°F (4°C). If pavement temperature is lower than 40°F (4°C), it may be warmed using a heat lance that puts no direct flame on the pavement.

337.4.2 Temperature: Sealant temperatures are to be maintained at the maximum heating temperature recommended by the manufacture.

337.4.3 Equipment: The melter applicator unit shall be a self-contained double boiler device with the transmittal of heat through heat transfer oil. It shall be equipped with an on board automatic heat controlling device to permit the attainment of a predetermined temperature, and then maintain that temperature as long as required. The unit shall also have a means to vigorously and continuously agitate the sealant to meet the requirements of Appendix X1.1 of ASTM D6690. The sealant shall be applied to the pavement under pressure supplied by a gear pump with a hose and wand and direct connecting applicator tip. The pump shall have sufficient pressure to apply designated sealant at a rate of at least three (3) gallons (11.4 L) per minute. Melter applicators shall be approved for use by the sealant manufacturer.

337.4.4 Placement of Sealant: The sealant shall be applied in cracks, joints, and sealant reservoirs uniformly from bottom to top and shall be filled without formation of entrapped air or voids.

Cracks and joints shall be slightly overfilled then leveled with a 3" sealing disk or v-shaped squeegee to create a neat band extending approximately 1" on each side of the crack or joint for surface waterproofing. The band shall be as thin as possible and shall not extend more than ⅛ inch above the pavement surface.

If the pavement is to be overlaid with Hot Mix Asphalt within six months of sealant application, cracks shall be routed, and sealant placement shall be recessed ¼" in the crack or joint reservoir with no over band. If routing is not used, the sealant over band thickness and width shall be kept as narrow and thin as possible.

During and after placement of the sealant, the Contractor shall protect against harm to persons or animals that may be exposed to the hot material.

337.4.5 Opening to Traffic: Sealant material shall not be exposed to traffic until fully cured. If the sealed area must be opened to traffic, blotter material shall be applied to the surface of all uncured sealant material.

All sealed cracks that have a clear opening of 1½ inches or greater shall have blotter material applied prior to opening to traffic.

On two lane roads or where traffic may come in contact with the hot sealant before it cures, a blotter or specialized bond breaking material shall be used to prevent asphalt bleeding and/or pickup of sealant by vehicular traffic. Blotter material shall be compatible with the crack sealant and any surface treatment being used.

337.5 APPLICATION OF FILLER MATERIAL FOR CATEGORY 2 CRACKS:

The Contractor shall comply with the material manufacturer's installation recommendations including but not limited to surface preparation, application equipment, and application procedures. No filler material shall be installed until all cracks to be filled have been inspected and approved by the Engineer. Filler material shall not be opened to traffic until fully cured.

337.6 APPLICATION OF FILLER MATERIAL FOR CATEGORY 3 CRACKS:

No filler material shall be installed until all cracks to be filled have been inspected and approved by

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the Engineer.

All machines, tools, and equipment used to install filler material will be subject to the Engineer's approval.

Hand tamp, vibratory plate compactor and rollers are acceptable for final compaction of filler material. Depending on depth of crack, lower lifts shall be compacted using a steel rod with a 1½" diameter head.

337.7 UNACCEPTABLE WORK:

The Contractor, at no additional cost to the contracting Agency, shall correct unacceptable work.

Unacceptable work shall include, but not be limited to, unsealed or unfilled cracks, material wastage on the sides of the roadway, and excess quantities of material on the roadway that adversely affects driving.

The Contractor shall not progress to a new area until the unacceptable work is corrected to the satisfaction of the Engineer. Correction of unacceptable work shall be accomplished within five working days after notification from the Engineer of the unacceptable work.

337.8 MEASUREMENT:

The Contractor shall meet with the Engineer or the Engineer's designated representative on a daily basis and supply a signed daily report indicating the date and identifying for each road segment:

- The amount of category 1 crack sealant material applied in total pounds and the total square yards of pavement sealed.
- The amount in pounds of category 2 crack filler material installed.
- The linear feet of category 3 cracks filled.

Payment for crack sealing and crack sealing shall be based on accepted quantities of Category 1 Crack Sealing, Category 2 Crack Filling, and Category 3 Crack Filling.

Accepted Category 1 Crack Sealing shall be measured by the square yards of pavement surface area sealed.

Accepted Category 2 Crack Filling shall be measured by the pounds of filler material placed.

Accepted Category 3 Crack Filling shall be the measured linear feet of cracks filled.

337.8 PAYMENT:

Payment for pavement crack sealing and crack filling will be at the contracted unit prices. Payment shall be full compensation for furnishing all labor, materials, equipment, tools, and incidentals used for surface preparation, placement of materials, and cleanup.

SECTION 340
CONCRETE CURB, GUTTER, SIDEWALK, CURB RAMPS, DRIVEWAYS AND ALLEY ENTRANCES

340.3.9 Tolerances, add the following:

Vertical displacement across joints shall not exceed 1/8 inch.

340.3.10 Deficiencies, add immediately after the first paragraph:

(A) Misalignment, heaving or settlement that results in a discontinuity in excess of 1/8-inch over 5 feet.

(B) Visible cracks, not contained within control joints that have opened to 1/32-inch or more.

(C) Crazing, spalling or scaling of the concrete surface.

(D) Gouges that expose aggregate.

(E) Graffiti

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(F) Imprints and/or depressions causing ponding or inconsistency in the specified finish of the concrete.

(G) Broken or chipped edges.

(H) Structural cracking, durability racking, or alkali-silica reaction (ASR) cracking

(I) Visible cracking in concrete used for architectural finishes and that negatively impacts the aesthetics, as determined by the Engineer.

Replace the second paragraph with the following:

Concrete work that does not comply with tolerance requirements of this section and Section 340.3.9 shall be removed and replaced to the nearest joint. Remove and replace gutters that exceed the ponding tolerance. Concrete work that exhibits these deficiencies (except graffiti) within the one (1) year warranty period shall also be subject to removal and replacement, to the nearest joint, at no cost to the owner. Grinding is not allowed in lieu of replacement. Any use of grinding to correct minor deficiencies shall be submitted and approved by the Engineer prior to use.

SECTION 350
REMOVAL OF EXISTING IMPROVEMENTS

350.1 DESCRIPTION, add the following:

The work under this Section shall consist of the disposal of any obstacle to construction, unless specifically noted on the Plans for removal or relocation by other entities.

Arrangements for disposal of all waste material shall be the responsibility of Contractor. All usable pipe culvert, as determined by the Engineer, shall be stockpiled within the right-of-way for salvage by the County. Removal and storage of traffic signs and other traffic control devices shall comply with section 401.2.5. Delivery of salvaged traffic signal and lighting equipment shall comply with section 470.6.

Removal of existing improvements shall be performed in a safe manner avoiding damage to improvements not designated forremoval.

350.2 CONSTRUCTION METHODS

350.2.2 Others, add the following:

Removal of traffic signal pole foundations unless otherwise indicated shall be to a depth of at least 18 inches below finished grade.

Remove and Salvage Traffic Sign Assembly shall consist of salvaging existing sign panels and posts, removing and disposing of the existing foundations, backfilling and compacting all voids, and restoring the existing surface to match previous existing conditions. The sign panels and posts shall be dismantled in a manner that will prevent damage. Concrete sign foundations shall be disposed of by the contractor. Contractor shall pre-arrange delivery of sign panels and posts by calling (602) 506-8662. The sign panels and posts shall be transported to and unloaded at 2909 W. Durango Street by the contractor in a manner that will prevent damage. The quantity measured for Remove and Salvage Traffic Sign Assembly includes all sign panels and posts that are a part of the assembly.

Part 300 add the following new Section:

SECTION 351
RELOCATION AND ADJUSTMENT OF EXISTING IMPROVEMENTS

351.1 DESCRIPTION:

This work shall consist of the movement of existing improvements and specialty items to accommodate project construction. Relocation is the horizontal movement or change in location of an existing improvement or item, as shown or described on the Project Plans. Adjustment is a change in the vertical position of an existing improvement or item, typically required to accommodate a change in grade at the location of the existing improvement.

351.2 MATERIALS:

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All relocations and adjustments requiring reseating, replacement, or the use of additional materials shall be accomplished using materials of the same or better quality than found in the existing improvements, as approved by the Engineer.

For mailbox relocations, the Contractor shall supply a replacement support post for any mailbox installation deemed hazardous by the Engineer. Hazardous mailbox installations may include but are not limited to support posts that act as fixed objects (i.e. rigid or non-deflecting posts that exceed the stiffness or breakaway characteristics of a nominal 4"x4" wood post buried 36 inches into the ground) and installations of multiple mailbox receptacles mounted on a horizontal beam.

351.3 CONSTRUCTION:

The work shall include the removal of posts, foundations, and other associated items directly related to the relocation or adjustment of the existing improvement; filling and compacting all holes left by such removals; and installing, adjusting, or reconstructing moved items in their new location.

Improvements shall be moved in such a manner that the moved elements and all remaining unmoved portions of previously attached improvements are not damaged. All portions of moved and remaining unmoved improvements that are damaged during the relocation or adjustment shall be repaired, or shall be replaced in kind by the Contractor, as approved by the Engineer, at the Contractor's expense.

All relocated or adjusted improvements shall exhibit the same quality, integrity, function, and appearance as the improvements exhibited prior to relocation or adjustment. The unmoved portion of the moved improvement shall be repaired or restored to the same type, quality, appearance, and strength as existed prior to relocation or adjustment.

If for any reason the improvement cannot be removed, relocated, and adjusted within the same working day, the disturbed/removed portion shall be secured from theft and damage until such time that it can be permanently installed in its final location. Also, where the move cannot be accomplished within the same working day, a temporary substitute facility shall be provided to accomplish the required function, as approved by the Engineer. Example: security fencing is to be relocated and the relocation is incomplete at the end of a work day, the contractor is to provide appropriate temporary fencing or approved alternative measures to secure the fenced area.

When the materials of the existing facility are insufficient in quantity to meet the relocation or adjustment requirement, then the Contractor shall provide additional new materials of like kind as needed to complete the relocation or adjustment.

When materials in the existing facility cannot be moved without deterioration in quality, appearance, strength, or function then the Contractor shall provide new replacement materials of like kind as needed for the relocation or adjustment.

Relocate Traffic Sign consists of salvaging the existing sign panel and post, removing the existing foundations, backfilling and compacting all voids, restoring the existing surface to match previous existing conditions and installing the traffic sign panel on a post or posts of appropriate length mounted on new post foundations. New post foundations shall be measured separately and not included as part of the Relocate Traffic Sign pay item.

351.4 MEASUREMENT:

Relocated or adjusted items will be measured by the number of improvements and/or the number of linear feet as designated in the fee proposal.

For linear items, such as relocated fencing, the length measured shall be the installed length; no measurement of the removal length shall be made.

The measurement of relocated mailboxes will be the number of mailboxes relocated to a new permanent location as indicated by the project plans or directed by the Engineer and shall include replacement posts to correct conditions deemed hazardous, as required for an acceptable complete in place installation. No measurement will be made for temporary relocations made to maintain mail delivery during construction.

351.5 PAYMENT:

Payment will be made at the contract unit price for each relocated or adjusted improvement. Payment shall be full compensation for all tools, equipment, labor, materials, services, transportation, and

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incidentals necessary for relocation or adjustment of the improvement including additional new materials or replacement material and repairs or adjustments to the unmoved remainder of fences and other facilities.

SECTION 401
TRAFFIC CONTROL

401.2 TRAFFIC CONTROL DEVICES, add the following:

All traffic control devices and their application shall conform to the Manual on Uniform Traffic Control Devices for Streets and Highways (MUTCD - United States Department of Transportation, Federal Highway Administration) as modified by the Arizona Department of Transportation's Supplement, the Arizona Department of Transportation Traffic Control Design Guidelines, current edition, the special provisions, and any field modifications made by the Engineer.

All traffic control devices shall meet the guidelines of NCHRP 350 or the AASHTO 2009 Manual for Assessing Safety Hardware.

If at any time the Engineer is unable to contact the Traffic Control Technician, the Engineer reserves the right to make contact with the traffic control subcontractor to request any materials or services deemed appropriate by a demonstrated or apparent need in accordance with the standards and guidelines established by the MUTCD as supplemented by the Arizona Department of Transportation and the Cochise County Department of Transportation's Traffic Control Manual for the safety of the public or workers. The cost of these materials or services shall be part of the cost of Traffic Control.

401.2.1 Installation of Temporary Traffic Control Devices: It shall be the responsibility of the Contractor to provide, erect, maintain, remove and/or relocate all temporary and existing traffic control devices and signal indications necessary to properly mark and control the construction area(s) for the safe and efficient movement of all roadway users.

The contractor shall maintain all traffic control devices 24 hours a day, 7 days a week (including weekend and holidays) for the entire duration of the construction or maintenance project. It shall be the contractor's or permittee's responsibility to have all traffic control devices inspected at least once during each workday, once per week during nighttime hours and immediately after a wind or rain storm. Any traffic control device not properly located shall be immediately adjusted or reinstalled.

The Contractor shall install temporary traffic control warning signs and devices prior to the start of any work in accordance with the approved Traffic Control Plan (TCP). All existing signs in conflict with the construction signs shall be covered, removed, or relocated.

The Contractor shall provide additional devices as determined by the Engineer, to safely control traffic.

All advanced warning construction signs shall be mounted on channels driven into the ground or be mounted on temporary spring stands. Each approach at one mile and at one half-mile point prior to the project shall be signed with "Road Work Ahead" and with speed limit signs, mounted on channels driven into the ground or mounted on temporary spring stands and placed at locations where the need for relocation during construction is minimized.

All temporary traffic control devices shall be ballasted with sandbags or other approved ballast. The amount of sandbags used shall be enough to provide adequate safety for the traveling public.

Ground mounted temporary traffic control signs for rural areas shall be mounted with the bottom of the sign at least five feet and not more than six feet above the near edge of the pavement and for urban areas shall be mounted with the bottom of the sign at least seven feet and not more than eight feet above the near edge of the pavement.

The Contractor shall mount signs on wind resistant, spring-type bases when conditions warrant or as requested by the Engineer.

The Contractor shall place flags above all signs.

The Contractor shall use warning lights to mark traffic control devices at night.

The Contractor shall mount Type B high-intensity flashing warning lights on all stop signs within the work zone.

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All construction warning signs (black on orange) shall use retroreflective sheeting with fluorescent orange Type VIII, IX or XI and all regulatory signs (black on white) shall use retroreflective sheeting with a minimum of Type IV retroreflective sheeting.

The Contractor shall use an arrow board for all stationary or moving lane closures.

The Contractor is responsible for all costs incurred in replacing lost or damaged traffic control devices and traffic control warning signs.

401.2.2 Traffic Cones: Are effective for daytime channelization of traffic and to delineate minor maintenance areas. Traffic cones are versatile because they are portable and if struck, they will minimize damage to vehicles. They can be set up and removed quickly. When traffic cones are approved by the Engineer for use, it is necessary to check them often because vehicles frequently move them. The minimum height for cones is 28" high and minimum weight is 10 pounds on arterials/collectors and 7 pounds on local roadways. When used at night, cones must have retroreflective bands as called for in the MUTCD.

401.2.3 Temporary Longitudinal Traffic Barriers: Temporary longitudinal traffic barrier installations shall be portable concrete barrier (PCB) or other segmented longitudinal barrier. The barrier and installation shall be in accordance with Chapter 9 of the AASHTO Roadside Design Guide. PCB shall use F-shape faces. Each barrier section shall be properly connected to the adjacent section to provide barrier continuity to resist movement, snagging, and/or instability of impacting vehicles. Panels and connections shall meet NCHRP 350 Test Level 3 or an approved test level of the AASHTO 2009 Manual for Assessing Safety Hardware.

401.2.4 Pavement Markings: Pavement markings used as an integral part of the traffic control plan shall be kept distinct and visible during their use. Temporary pavement markings shall match and meet the markings in place at both ends of their usage.

401.2.5 Removal of Permanent Traffic Control Devices: The Contractor shall notify the Engineer and obtain the Engineer's approval prior to the removal of any permanent traffic control device.

The Contractor shall remove (without damage) all permanent signs including sign posts that are no longer applicable. The sign panels and posts shall be dismantled and transported to the Cochise County Sign Shop in a manner that will prevent damage. Concrete sign foundations shall be removed and disposed of by the Contractor. The Contractor shall coordinate with the Cochise County Sign Shop (520) 432-9300 to establish an acceptable delivery time during normal working hours. The sign panels and posts shall be delivered to: 1229 Hereford Road, Bld B, Bisbee, Arizona 86503

401.4 TRAFFIC CONTROL MEASURES, add the following:

401.4.1 Traffic Control Plan: Construction shall not commence without an approved Traffic Control Plan (TCP). At the time of the pre-construction meeting, the Contractor shall submit preliminary traffic control plans for each phase of the work for review. Plans shall be of an appropriate size and legible, plans found to be deficient by the Engineer shall be returned. The Contractor shall design the traffic control plan using the posted speed limit existing prior to commencement of work as the design speed. The TCP shall show all striping, signing, barricading and distances for all devices for all movements of roadway users during each phase of construction. The TCP shall show existing traffic control signs and temporary construction signs; shall identify conflicting signs to be covered/removed or relocated; and shall identify other features that may conflict with the placement of temporary signage. The TCP shall also show the duration with the start and end date of each phase. When requested by Cochise County, the Contractor shall supply a copy of the manufacturer's certification of compliance with NCHRP 350 test requirements (or compliance with a designated approved test level of the AASHTO Manual for Assessing Safety Hardware) for any of the Contractor proposed traffic control devices. The manufacturer's certification shall identify the NCHRP 350 or AASHTO test number. The County will within 10 working days review the plan and notify the Contractor of approval or note items to be revised.

401.4.2 Traffic Control Technician: The Contractor shall appoint a Traffic Control Technician (other than the superintendent/foreman), who has been properly trained and certified in the application of work zone traffic control, to maintain all necessary traffic control devices. At the beginning and end of each workday and at a minimum of once during nighttime hours during the work week, and periodically throughout the day, the Traffic Control Technician shall inspect the construction work site. The Traffic Control Technician shall ensure that all construction signs and barricades are standing upright in

accordance with the approved traffic control plan, free of dirt and debris and visible to intended traffic. At the end of the workday all non-essential traffic control devices will be removed. The Traffic Control Technician shall also inspect the construction work site at least once during weekends. The Contractor shall immediately correct deficiencies noted by the Engineer. The Contractor shall provide an after-hours pager and telephone number for the Traffic Control Technician at the pre-construction meeting.

401.4.3 Intersection Restriction: Off-duty uniformed police officers are required at all signalized intersections when restrictions are present, and may be required at other locations as requested by the Engineer. Any work performed in the right of way within 300 feet of signalized intersections and intersections formed by two multilane roadways shall require an off-duty uniformed police officer.

401.4.4 Traffic Control Devices: The Contractor shall provide and maintain all necessary traffic control devices until acceptance of the project by the County.

Pavement markings used as an integral part of the traffic control plan shall be kept distinct and visible during their use. Temporary pavement markings shall match and meet the markings in place at both ends of their usage.

401.4.5 Flaggers: All flaggers shall be properly trained and certified by a recognized source, such as the American Traffic Safety Services Association (ATSSA) or the International Municipal Signal Association (IMSA) and shall carry with them at all times a current certification as proof that all training requirements have been completed.

401.4.6 Failure to Provide Adequate Traffic Control Measures: If the Contractor fails to provide adequate traffic control measures, the Engineer may have the work accomplished by other sources. The cost of having this work accomplished by other sources will be computed in accordance with Section 109.5. The total cost will be deducted from monies due or to become due to the Contractor.

401.5 GENERAL TRAFFIC REGULATIONS, add the following:

The Sheriff's Department shall be provided with the name and phone number of the person responsible for 24-hour maintenance of all traffic control devices.

The Contractor shall notify all affected emergency services such as fire departments, police stations, and emergency management system by handbill a maximum of 48 hours and minimum of 24 hours in advance of any street restrictions.

401.5.1 Road Closure and Road Restrictions: A road closure for the convenience of the Contractor is not authorized. Traffic restrictions are not permitted on arterial or collector streets during peak traffic hours of 6:00 a.m. to 8:30 a.m. and 4:00 p.m. to 7:00 p.m. unless authorized by the County Engineer.

401.5.2 Minimum Lane Requirements: At signalized intersections, during peak hours, two lanes shall be open on roads with four or more lanes. During off-peak traffic hours, the minimum number of lanes shall be two lanes (one in each direction).

401.5.3 Temporary Lane Diversions: For construction or trenching that requires movement of traffic from the normal travel lanes, temporary lane diversions may be used only during daylight hours and the normal traffic lanes shall be restored prior to the end of daylight hours. Traffic plates and temporary pavement shall be used to restore traffic lanes.

401.5.4 Regulatory Speed Limit Signs: An appropriate regulatory speed limit sign shall be used where traffic is maintained on temporary detour roads, diversions, or on traffic lanes that are severely restricted.

401.5.5 Access to Adjacent Property: Access to all adjacent properties shall be maintained whenever possible. When access cannot be maintained, Contractor shall notify the adjacent residents at least two working days in advance of the access closure. In no case shall the access be closed for more than four hours. Access to fire stations, hospitals, sheriff stations and schools shall be maintained at all times.

401.5.6 Signal Equipment Repair: If existing signal equipment is damaged the Contractor shall notify the owner of the signal in order to facilitate the prompt restoration of the traffic signal operation. All costs associated with the repair of damaged traffic signals, caused by Contractor construction activity, shall be borne by the Contractor.

401.5.7 Temporary Longitudinal Traffic Barriers / Steel Plating: Open excavations and trenches within 10

feet of an active traffic lane shall be protected at night and during non-working hours from vehicle traffic by steel plating or the use of temporary longitudinal traffic barriers complying with requirements of section 401.2.3. Open excavations as may occur with reinforced concrete box culvert construction and other work shall require temporary longitudinal traffic barriers to separate vehicle traffic from the work site. The Contractor shall use temporary longitudinal traffic barriers when construction hazards warrant, or as requested by the Engineer. Impact attenuation devices shall be provided by the Contractor commensurate with barrier end treatment requirements.

401.5.8 Changeable Message Boards for Public Information:

Changeable Message Boards for Public Notification are for informing the motoring public of project information, traffic restrictions, road closure, or other public awareness items deemed necessary for the project. Changeable message boards shall comply with the requirements of section 701-3.08 of the Arizona Department of Transportation 2008 Standard Specifications for Road and Bridge Construction. The Contractor shall furnish, install, and operate the changeable message boards as requested by the Engineer. Message board locations shall be shown on the Traffic Control Plans.

401.6 MEASUREMENT, Section 401.6 is replaced with the following:

Measurement for Traffic Control shall be made on a Lump Sum basis. This lump sum measurement shall include all materials, equipment and labor necessary to facilitate traffic control per the contract documents. Traffic Control includes but is not limited to the application and removal of temporary pavement markings including related modification of existing pavement markings, pilot cars, flagmen, barricades, sign panels, sign stands, warning lights, and related temporary pavements.

No direct measurement of individual traffic control elements or devices will be made. All traffic control devices, unless otherwise noted, shall be considered as included in the lump sum measurement for the Traffic Control pay item.

No direct measurement for the installation or removal of temporary pavements will be made. All sawcutting, grading, aggregate base course materials, asphaltic concrete pavement, labor, and equipment shall be considered as included in the lump sum measurement for the Traffic Control pay item.

Uniformed Off-duty Law Enforcement Officers including vehicle and equipment will be measured by the hour for each hour required to perform traffic control duties. When an officer is used less than the agency's minimum number of hours and the Contractor is charged for the agency's minimum number of hours, the minimum hours charged will be approved for payment. Time over the agency's minimum number of hours will be measured by the hour.

Changeable Message Boards for Public Notification shall be measured by the day for each calendar day for each sign authorized and operating as directed by the Engineer. Measurement will only be made for actual days-in-use.

When included as a separate pay item within the fee schedule, Portable Concrete Barrier (PCB) shall be measured by the foot. Otherwise, portable concrete barrier shall not be measured and shall be considered a traffic control device.

401.7 PAYMENT, Section 401.7 is replaced with the following:

Payment for Traffic Control other than Uniformed Off-duty Law Enforcement Officers shall be made at the lump sum contract price in equal payments distributed over the entire duration of the project. Payment for Traffic Control shall be full compensation for all labor, pilot cars, flagmen, materials, traffic control devices, and miscellaneous items necessary to complete the work.

Payment for Uniformed Off-Duty Officer will be based on approved time sheets or invoices for all actual hours Contractor provided a Uniformed Off-Duty Law Enforcement Officer for traffic control purposes at the request and with the approval of the County. Expenses, eligible for reimbursement, are labor costs, supported by approved time sheets or invoices and directly related documented expenses such as taxes, bond cost charges to Contractor in connection with the Uniformed Off-Duty Law Enforcement Officer assignment, and special jurisdictional requirements. No additional mark-up for profit and/or fee for Contractor will be eligible for reimbursement.

Approved quantities for Changeable Message Board for Public Notification shall be paid at the contract unit price. Payment will be compensation in full for furnishing, transportation, installation,

programming, adjustment, maintenance, and removal of the changeable message boards.

Separate payment for Portable Concrete Barrier will only be made when Portable Concrete Barrier is included as a separate pay item within the fee schedule. Payment will be full compensation for the furnishing, transportation, installation, adjustment, maintenance, and removal of the temporary barrier system.

SECTION 415
FLEXIBLE METAL GUARDRAIL

Section 415 is replaced with the following:

415.1 DESCRIPTION:

The work under this section shall consist of furnishing all materials, constructing new guardrail, and delineating guardrail sections at the location shown on the project plans in accordance with Arizona Department of Transportation Standard Specifications for Road and Bridge Construction, current edition, SECTION 905 GUARDRAIL and any supplemental Technical Bulletins and notices.

Part 400 add the following new Section:

SECTION 421
WIRE FENCE

421.1 Description:

The work under this section shall consist of applying and furnishing all materials at the location shown on the project plans in accordance with Arizona Department of Transportation Standard Specifications for Road and Bridge Construction, current edition, SECTION 903 WIRE FENCE and any supplemental Technical Bulletins and notices.

Part 400 add the following new Section:

SECTION 423
CATTLE GUARDS

423.1 Description:

The work under this section shall consist of applying and furnishing all materials at the location shown on the project plans in accordance with Arizona Department of Transportation Standard Specifications for Road and Bridge Construction, current edition, SECTION 906 CATTLE GUARDS and any supplemental Technical Bulletins and notices.

Part 400 add the following new Section:

SECTION 461
PAINTED PAVEMENT MARKINGS

461.1 Description:

The work under this section shall consist of applying and furnishing all materials at the location shown on the project plans in accordance with Arizona Department of Transportation Standard Specifications for Road and Bridge Construction, current edition, SECTION 708 PERMANENT PAVEMENT MARKINGS and any supplemental Technical Bulletins and notices.

Part 400 add the following new Section:

SECTION 463
RAISED PAVEMENT MARKERS

463.1 Description:

The work under this section shall consist of applying and furnishing all materials at the location shown on the project plans in accordance with Arizona Department of Transportation Standard Specifications for Road and Bridge Construction, current edition, SECTION 706 RAISED PAVEMENT MARKINGS and any supplemental Technical Bulletins and notices.

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Part 400 add the following new Section:

SECTION 464
ROADSIDE SIGN SUPPORTS

464.1 DESCRIPTION:

The work under this section shall consist of furnishing and installing roadside sign supports in accordance with the details shown on the plans and the requirements of these specifications.

Sign supports shall consist of breakaway, square perforated tube, and U-channel sign posts, and foundations. The type, size, and installation location of the sign posts will be shown on the project plans.

Sign post and foundations shall conform to the requirements of Cochise County Standard Details.

464.2 MATERIALS

464.2.1 General: Certificates of Analysis shall be submitted for all square perforated tube sign posts and U-channel sign posts.

Excessive damage to the finish of the posts during shipping, handling, or installation will result in rejection of the damaged posts.

464.2.2 Breakaway Sign Post Shapes: Posts shall be fabricated from structural steel conforming to the requirements of ASTM A 572, Grade 50 or ASTM A 588 at the option of the contractor. Base plates for the breakaway connections and friction fuse plates and back plates for the post hinge assembly shall be fabricated from the same type structural steel selected for the sign posts.

Posts shall be fabricated from structural steel conforming to the requirements of ASTM A 572, Grade 50 or ASTM A 588 at the option of the contractor. Base plates for the breakaway connections and friction fuse plates and back plates for the post hinge assembly shall be fabricated from the same type structural steel selected for the sign posts.

All plate holes shall be drilled and all plate notches shall be saw cut, except that flame cutting will be permitted provided all edges are ground. Flange holes shall be drilled or sub-punched and reamed. The posts shall be saw cut for the hinge and bolted as detailed on the plans.

Bolts, nuts and washers shall conform to the requirements of ASTM A 325. Posts and plates shall be galvanized after fabrication in accordance with the requirements of ASTM A 123. Bolts, nuts and washers shall be cadmium plated in accordance with the requirements of ASTM B 766, or zinc plated in accordance with the requirements of ASTM B 633.

464.2.3 Perforated Sign Posts: Single and telescoping perforated posts shall be square tube fabricated from galvanized sheet steel 0.105 inches (12 gauge) or 0.135 inches (10 gauge) as required by the project specifications. Sheet steel shall conform to the requirements of ASTM A 653 for either SQ Grade 40 or SQ Grade 50 Class 1, and be galvanized in accordance with the requirements of Coating Designation G-90. The posts shall have a wall thickness, including coating, of 0.097 to 0.116 inches for 12 gauge and 0.127 to 0.146 inches for 10 gauge.

Posts shall be welded directly in the corner by high frequency resistance welding or equal. The outside edges of the posts shall be scarfed as necessary to produce a standard corner radii of 5/32 ± 1/32 inch.

External welded surfaces and scarfed areas shall be re-galvanized after fabrication.

Holes 7/16 ± 1/64 inch in diameter shall be provided on one-inch centers along all four sides over the entire length of the post. The holes shall be laterally centered on the longitudinal centerline of each face. Hole positioning and spacing shall be the same on all four faces, such that the hole centerlines for each group of four holes shall pass through a common point on the longitudinal centerline of the tube. For telescoping posts, holes shall be in proper alignment to allow 3/8-inch diameter bolts to pass through the entire post.

The finished posts shall be straight and have a smooth, uniform finish. All consecutive sizes of posts shall be freely telescoping for not less than 10 feet of their length without the necessity of matching any particular face to any other face.

Perforated sign posts shall be manufactured by an approved manufacturer. A list of approved manufacturers of perforated sign posts is shown on the Department's Approved Products List (APL).

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Copies of the most current version of the APL are available on the internet from the Arizona Transportation Research Center (ATRC), through its PRIDE program.

Bolts shall conform to the requirements of SAE Specification J 429, Grade 5, or ASTM A 449, Type 1. Nuts shall conform to the requirements of ASTM A 563, Grade A. Washers shall conform to the requirements of ASTM F 844.

Bolts, nuts and washers shall be zinc coated in accordance with the requirements of ASTM B 633 or cadmium plated in accordance with the requirements of ASTM B 766.

464.2.4 U-Channel Sign Posts:

U-channel posts shall be fabricated from rerolled rail steel conforming to the requirements of ASTM A499 or hot-rolled carbon steel bars.

Prior to rerolling the rail steel, the rail nominal weight shall be 91 pounds per yard and shall meet the requirements of ASTM A1 pertaining to quality assurance.

Yield Point of the steel shall be 80,000 pounds per square inch (psi) minimum.

The cast heat analysis of the steel shall conform to the following requirements:

Element	Composition (Percent)
Carbon	0.67 - 0.82
Manganese	0.70 - 1.10
Phosphorus, max.	0.04
Sulphur, max.	0.05
Silicon	0.10 - 0.25

Posts shall be a uniform, modified, flanged channel-section as shown in Cochise County Standard Detail CC133. Weight of the posts shall be 2.00 lbs. per lineal foot, plus or minus five percent. The post shall be punched with continuous 3/8-inch diameter holes on 1.0-inch centers. The first hole shall be 1.0 inches from top and bottom of post.

The post shall consist of two parts, a sign post and a base post. The sign post lengths shall be supplied in 6-inch increments up to 12.0 feet as required for the installation location. The base posts shall be 3.5 feet in length, pointed at one end, and have at least eighteen holes in the base post, starting 1.0 inch from the top and continuing at 1.0-inch increments.

Posts shall be machine straightened to have a smooth uniform finish, free from defects affecting their strength, durability, or appearance. All holes and edges shall be free from burrs. Permissible tolerance for straightness shall be within 1/16 inch in 3 feet.

Posts shall be galvanized after fabrication in accordance with the requirements of ASTM A123. Bolts, nuts, washers and spacers shall be cadmium plated in accordance with the requirements of ASTM B 766 or zinc plated in accordance with the requirements of ASTM B633.

U-channel base posts shall be driven into the ground to a minimum depth of 36 inches. Where rock is encountered, the rock shall be cored, drilled or removed to a minimum diameter of eight inches and to a depth sufficient to place Portland cement concrete two inches below the bottom of the base post and fill the hole to within one inch of the top. Solid rock coring or drilling is not required to continue beyond 2 inches in depth regardless of the depth at which the rock is encountered, the base post may be cut at the bottom prior to being set in Portland cement concrete where rock does not permit use of full length base post.

464.2.5 Concrete: Concrete for perforated sign post foundations shall be Class B in accordance with Section 725.

Concrete for breakaway sign post foundations shall be Class B, except that utility concrete may be used for foundations using stub post sizes S 3 x 5.7 and S 4 x 7.7. Class B concrete shall conform to the requirements of Section 725. Concrete for perforated sign posts foundations and U-channel sign post foundations, when required, shall conform to the requirements of Subsections 922-2 and 922-3.

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Foundation stub posts shall be fabricated from the same type of steel selected for the appropriate sign posts. Breakaway stub posts shall be galvanized a minimum of 12 inches down from the top of the stub. Galvanizing shall be in accordance with the requirements of ASTM A 123.

Reinforcing steel bars for breakaway sign post foundations shall conform to the requirements of ASTM A 615, Grade 40. Reinforcing steel wire shall conform to the requirements of ASTM A 82.

464.3 CONSTRUCTION:

Foundations for perforated sign posts and U-channel posts shall be constructed to the details and dimensions shown on the plans.

Perforated and U-channel sign post lengths shall be determined by the contractor at the time of construction staking. Posts shall be cut to the proper lengths in the field. Splicing will be permitted for single perforated posts; however, splices will be limited to one per each post installation and the splicing shall be accomplished in accordance with the details shown on the plans. The minimum length of any spliced piece of post shall be two feet.

Sign posts shall be erected plumb.

464.4 MEASUREMENT:

Breakaway sign posts will be measured by the linear foot for each size of post furnished and erected. The length of each size of post will be measured from the bottom of the upper base plate to the top of the post, measure dot the nearest 0.1 feet. The total length of all posts of the same size will be rounded to the nearest foot.

Perforated sign posts and U-channel sign posts shall be measured by the foot, to the nearest 0.1 feet for each post furnished and installed. The total length of all posts of the same type will be rounded to the nearest foot. Telescoping post members will be considered as one post after installation and will not be measured separately. The length of perforated sign post shall be measured from the top of the post to the bottom of the eighteen inches (18") located in the post foundation. The length of U-channel sign posts shall not include the U-channel base post.

Foundations for sign posts will be measured by the unit each for each type of foundation constructed, except that concrete and excavation, when required for setting U-channel base posts, will be considered as part of the post.

464.5 PAYMENT:

The accepted quantities of breakaway posts, perforated sign posts, U-channel sign posts, and foundations for the sign posts, measured as provided above, will be paid for at the contract unit prices complete in place.

The contract unit prices paid shall include full compensation for furnishing all labor, excavation, materials, tools, equipment and incidentals, and for doing all the work involved in constructing foundations, furnishing and erecting the sign posts including galvanizing and furnishing all metal plates and hardware, as shown on the plans and as specified herein, complete in place.

SECTION 465
SIGN PANELS

465.1 Description:

The work under this section shall consist of furnishing and installing sign panels in accordance with the details shown on the plans and the requirements set forth herein.

The sign panels shall be of the following types:

- Extruded Aluminum Sign Panels with Demountable Characters
- Flat Sheet Aluminum Sign Panels with Direct-Applied or Silk-Screened Characters
- Warning, Marker, and Regulatory Sign Panels
- Route Shields for Installation on Sign Panels

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- EXIT ONLY for Installation on Sign Panels

465.2 Materials:

465.2.01 General:

Certificates of Compliance, conforming to the requirements of Subsection 106.05, shall be submitted for all materials required for fabricating sign panels, including retro reflective sheeting.

Shipment, storage, and handling of sign panels shall conform to the recommendations of the manufacturers of the sign panel components. Fabricated signs and overlay sheets shall be shipped on edge. Damage to the sign panel or legend resulting from banding, crating or stacking may be cause for rejection of the signs.

465.2.02 Extruded Aluminum Sign Panels with Demountable Characters:

Panels shall be fabricated from 12-inch wide aluminum extrusions formed from Aluminum Alloy 6063-T6 conforming to the requirements of ASTM B 221 and fastened together by bolt connections as shown on the plans.

Panel facing shall be covered with retroreflective sheeting of the color specified on the plans. The retroreflective sheeting shall conform to the requirements of Section 1007.

The letters, numerals, symbols, borders and other features of the sign message shall conform to the requirements of Subsection 465-2.14, Demountable Characters.

Panel surfaces to be covered with retroreflective sheeting shall be prepared in accordance with the recommendations of the sheeting manufacturer. Panel surfaces not covered with sheeting shall be etched in accordance with the recommendations of the extrusion manufacturer to reduce glare from reflected sunlight.

After all fabrication has been completed, including the cutting and punching of holes, except holes for demountable letters, numerals, symbols and borders, the aluminum extrusions shall be degreased and the retroreflective sheeting shall be applied.

Aluminum extrusions shall be flat with 1/4 inch of tolerance allowed in an eight-foot length, with proportionally greater tolerances permitted on lengths greater than eight feet. Flatness tolerance across the face of each extrusion shall be 0.5 percent of the width.

Aluminum extrusions shall be bolted together on 12-inch centers with a maximum allowable gap of 1/32 inch between extrusions.

Shop fabricated sub-assemblies shall be rigidly braced for transportation and erection. Hardware utilized to fasten panels to supports shall conform to the panel manufacturer's recommendations.

Each completed sign panel shall be provided with a side trim molding fabricated from extruded Aluminum Alloy 6063-T6 conforming to the requirements of ASTM B 221. The trim molding shall be fastened to each individual 12-inch aluminum extrusion with two 5/32-inch diameter self-plugging aluminum blind rivets, 2-1/2 inches from either edge. The exposed surface of the side trim molding shall be treated by etching as recommended by the manufacturer to reduce glare from reflected sunlight.

Each completed sign panel shall be shipped with sufficient bolt clamps placed to install the panel on the sign posts as shown in the plans. Bent bolt channels will be cause for rejection of the sign panel.

465.2.03 Blank

465.2.04 Blank

465.2.05 Blank

465.2.06 Blank

465.2.07 Flat Sheet Aluminum Sign Panels with Direct-Applied or Silk-Screened Characters:

Panels shall be fabricated from 0.125-inch thick, 5052-H38 Aluminum Alloy conforming to the requirements of ASTM B 209.

Panel facing shall be prepared and covered with retroreflective sheeting in accordance with the recommendations of the sheeting manufacturer. The color of the sheeting shall be as specified on the

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plans or as shown in the Manual of Approved Signs.

All surfaces not covered shall be etched to reduce glare from reflected sunlight.

The retroreflective sheeting shall conform to the requirements of Section 1007. Splicing of retroreflective sheeting shall not be allowed on sign panels having a minimum dimension up to and including four feet.

Messages shall be reflectorized white or, if called for on the plans, opaque black and shall be produced by either silk screening or direct-applying lettering as specified under Subsection 465-2.15.

465.2.08 Blank

465.2.09 Warning, Marker, and Regulatory Sign Panels:

Panels shall be fabricated from flat sheet aluminum and shall be reflectorized as specified herein.

Panels shall be fabricated in one piece from 0.125-inch thick, 5052-H38 or 6061-T6 Aluminum Alloy conforming to the requirements of ASTM B 209.

All surfaces of panels to be covered with retroreflective sheeting shall be prepared in accordance with the recommendations of the sheeting manufacturer. Surfaces not covered shall be etched to reduce glare from reflected sunlight. Retroreflective sheeting shall conform to the requirements of Section 1007.

Warning signs shall be reflectorized with yellow retroreflective sheeting.

Regulatory signs shall be reflectorized with silver-white retroreflective sheeting.

Reflectorized red signs shall be reflectorized with silver-white retroreflective sheeting. The red color shall be produced by silk screening.

Regulatory signs with reflectorized red circles and slashes shall be reflectorized with silver-white retroreflective sheeting. The red color shall be produced by silk screening.

Interstate route markers shall be cut to shape. The colors and legend shall be as shown on the plans and shall be reflectorized with silver-white retroreflective sheeting. The Interstate route colors shall be silk screened. The numerals may be silk-screened or direct-applied characters.

United States, State Route, and Cardinal Direction markers shall be reflectorized with silver-white retroreflective sheeting unless otherwise shown on the plans.

Splicing of retroreflective sheeting shall not be allowed on sign panels having the minimum dimension up to and including four feet.

Sign panels shall be attached to the posts with bolts as shown in the plans. A nylon washer, conforming to ANSI Standard and having a diameter two times the bolt head diameter, shall be placed between the bolt head and panel face. Fastening nuts shall be heavy hex; however, standard nuts may be used if a flat wash is placed between the nut and sign posts.

465.2.10 Blank

465.2.11 Route Shields (For Installation on Sign Panels):

Route shields shall be cut to shape and shall consist of 0.063-inch thick, 5052-H38 Aluminum Alloy conforming to the requirements of ASTM B 209. The aluminum shall be degreased and etched in accordance with the recommendations of the sheeting manufacturer. Retroreflective sheeting shall be silver-white and shall conform to the requirements of Section 1007. The size of the numerals shall be half the height of the shield.

Route shields shall be attached to the sign panel with self-plugging aluminum blind rivets with a 1/4-inch thick nylon spacer on each rivet between the route shield and the sign panel.

465.2.12 EXIT ONLY (For Installation on Sign Panels):

EXIT ONLY panels shall be fabricated from 0.063-inch thick, 5052-H38 Aluminum Alloy conforming to the requirements of ASTM B 209 with yellow retroreflective sheeting adhered to the face side. The aluminum shall be degreased and etched in accordance with the recommendations of the sheeting manufacturer. Retroreflective sheeting shall conform to the requirements of Section 1007.

EXIT ONLY panels shall be attached to the sign panel with self-plugging aluminum blind rivets with a 1/4-inch thick nylon spacer on each rivet between the EXIT ONLY panel and the sign panel.

The letters, arrows, and borders shall consist of black embossed aluminum frames or flat sheet aluminum frames with no reflectors. The height of the letters shall be 12 inches unless otherwise specified in the plans. The panel shall be 36 inches in height unless otherwise specified in the plans.

465.2.13 Retroreflective Sheeting, Inks and Opaque Film:

Retroreflective sheeting, sign-making inks, and opaque films shall conform to the requirements of Section 1007.

Signs shall be fabricated in accordance with the recommendations established by the manufacturer of the sign sheeting. All processes and materials used to make a sign shall in no way impact the performance, uniform appearance (day and night), or durability of the sheeting, or invalidate the sign sheeting manufacturers' warranty.

All sheeting used for letter and number text shall be of the same type and brand, and shall be installed at a zero-degree orientation.

465.2.14 Demountable Characters:

(A) General:

Letters, numerals, symbols, route shields, borders, and other features of the sign message shall consist of cut-out, flat sheet aluminum legends, with direct-applied sign sheeting or other finishes, that are mounted to the sign panel with rivets as described herein. All characters shall be placed on the signs in a straight and true fashion.

Flat sheet aluminum substrates used for characters and borders shall be either aluminum alloy 3105-H14, 3003-H14, or 5052 as specified in ASTM B 209. Characters produced from the flat sheet aluminum alloy shall sit flat on the face of the sign panel without visible gap or deformation.

The thickness for letters and numbers shall be 0.032 inches. The thickness for symbols, route shields, and borders shall be 0.063 inches.

All aluminum shall be chemically treated with a chromate acid conversion type coating, or equivalent, to form an oxidation resistant barrier film that is suitable for long term outdoor application. The coating shall prevent the occurrence of oxidation that may cause streaking or discoloration on the sign. The coating shall be applied in accordance with the manufacturer's specifications, and shall have a minimum thickness of 0.002 inches.

All corners and edges of the characters shall be clean and well-defined with no apparent waviness, tears, delamination, deformation or flaws. Burrs and waste material generated from the cutting process shall be removed so characters have a clean, flat, and correct appearance.

Design of letters and numbers shall be in accordance with the project plans.

Splicing of aluminum panels will be acceptable for diagrammatic arrows or other large symbols and shields exceeding 48 inches in more than one direction. Splices, when required, shall include a continuous four- to six-inch wide aluminum back plate that overlaps the joint. The back plate shall ensure no gap at the splice joint when the symbol is assembled and attached to the sign.

Borders on signs with demountable characters shall also be made of aluminum substrate panels, unless otherwise specified. However, in all cases borders on signs with demountable characters shall be made of the same material as the legend.

(B) Sheeting and Colors:

Sheeting or film applied to demountable characters shall be a continuous monolithic piece, without splice or patch, that covers the entire front face of the character. Splicing of the sheeting for demountable borders or characters which have a dimension larger than 48 inches in more than one direction will be allowed. Only one splice shall be allowed every four feet. When a splice is necessary, the adjoining edges shall be placed so there is no visible gap between the two pieces.

The adhesive system for sheeting and opaque films shall form a durable bond which tightly adheres to the aluminum or sign background. After attachment, the sheeting and opaque films shall not discolor, crack, craze, blister, bubble or delaminate. Sheeting and film adhesives must be warranted by the manufacturer against such defects as specified in Section 1007. Only those sheeting and film products which provide the specified warranty will be acceptable.

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The color for demountable letters, numbers, symbols, and route shields on green, blue, and brown background signs shall be white, and shall conform to the requirements of Section 1007. Demountable legends on white and yellow background signs shall be black, and shall be opaque and non-reflective. Acceptable finishes for black characters shall be porcelain-enameled black, powder-coated black, or laminated black opaque acrylic film.

When borders are used with demountable characters, white legend and border shall be used on green, blue, or brown sign backgrounds, and black legend and border shall be used on white or yellow sign backgrounds. Sign sheeting conforming to Section 1007 shall be used for white borders. Black borders shall be porcelain-enameled black, powder-coated black, or laminated black opaque acrylic film.

Black porcelain enameling, black powder-coatings, or laminated black opaque acrylic film to be used for characters or borders, as specified above, shall be applied in accordance with the coating manufacturer's recommendations. The contractor shall provide copies of any warranties provided by the manufacturer for such coatings to the Engineer.

On combination signs, such as a green background sign with white characters that also includes a smaller panel with yellow background and black characters, the color scheme used for the characters and border for each portion of the sign shall be as specified above, i.e. white legend and border shall be used on the green background portion of the sign and black legend and border shall be used on the yellow background portion.

(C) Attachment of Characters and Borders:

Self-plugging aluminum, protruding, regular head blind rivets shall be used to secure all demountable characters. The rivets shall conform to the applicable requirements of International Fasteners Institute (IFI) 114 standard for break mandrel blind rivets. All rivets shall be 5/32 inch in diameter with the appropriate grip range.

Rivets shall be either IFI 114 Grade 10 or 11 aluminum alloy rivets. The rivets shall have an ultimate shear and tensile strength that has been determined by IFI 135 Specification 2.1 and 2.2. The ultimate shear and tensile strength shall meet or exceed those values specified for a 5/32 inch (0.1562) nominal rivet diameter per IFI 114 Table 6 for Grades 10 or 11. A higher strength and grade aluminum rivet can be used at the option of the sign fabricator.

Rivets securing the characters to the back panel shall be of sufficient length to ensure a secure attachment and conform to the grip length specifications of the rivet manufacturer. The determination of rivet grip length shall include the total thickness of the joint. This thickness shall include the character (sheeting and aluminum sheet), spacer (if applicable) and the sign back panel (sheeting and aluminum extrusion).

The hole size used to install the rivets shall conform to the recommendation of the rivet manufacturer and Table 2 of IFI 114. Rivets shall be placed a minimum of four times the diameter of the rivet from the edge of the character being attached, e.g., 5/8-inch clearance for a 5/32-inch diameter rivet. Clearance shall be measured to the outside of the rivet head.

Minimum requirements for attaching demountable characters shall be as follows:

Straight numerals and letters such as "1" shall have three rivets, one at the top, middle and bottom. The more complex numerals and letters shall have from four to seven rivets. Letters such as "W" and "M" typically require seven rivets. Letters and numerals such as "P", "H" and "9" typically require six rivets. Letters and numerals such as "G", "S", "2", "3" and "7" typically require five rivets. A rivet shall secure each corner of the letter or numeral. For shields and symbols, rivets shall be spaced evenly around the entire perimeter. Additional rivets shall be added in the middle of the shield or symbol as necessary to eliminate bowing. Rivets for borders shall be spaced evenly around the border.

The actual number of rivets used will depend on the thickness, configuration, weight, position (with or without spacers), size of the character being attached, and the recommendations of the rivet manufacturer. The number and location of rivets shall be sufficient to secure the character to the panel so it shall not miss-align, bend or move when subjected to wind loading. Additionally, the number of rivets used shall ensure that the character does not bow or pull away from the back panel for the life of the sign. Rivets shall be placed in a defined, evenly spaced pattern which is consistent from character to character. The placement and pattern of rivets shall not interfere with the appearance of the sign from normal drive-by viewing distances. The contractor shall supply standard punch details prior to

fabrication.

The protruding head and shaft of the rivets shall closely match the color of the character on which they are being applied, e.g., black characters shall be applied with black rivets. Aluminum colored rivets are acceptable for mounting white characters.

The coating used to color the rivets shall be a factory-applied anodized type finish, or equivalent, that is suitable for long term outdoor application. The coating shall have durable colorfastness and shall be capable of preventing the occurrence of oxidation that may cause streaking or discoloration on the sign. Non-factory painting of the protruding heads of the rivets is not acceptable.

465.2.15 Silk-Screened or Direct-Applied Characters:

Silk-screened letters, numerals, arrows, symbols, and borders, shall be applied on the retroreflective sheeting background of the sign by direct or reverse screen process. Messages and borders of a color darker than the background shall be applied to the retroreflective sheeting by direct process. Messages and borders of a color lighter than the sign background shall be produced by the reverse screen process.

Opaque or transparent colors, inks, and paints used in the screen process shall be of the type and quality recommended by the manufacturer of the retroreflective sheeting.

The screening shall be performed in a manner that results in a uniform color and tone, with sharply defined edges of legends and borders and without blemishes on the sign background that will affect intended use.

Signs, after screening, shall be air dried or baked in accordance with the manufacturer's recommendations to provide a smooth hard finish. Any signs on which blisters appear during the drying process will be rejected.

Direct-applied letters, numerals, symbols, borders, and other features of the sign message shall be cut from black opaque or retroreflective sheeting of the color specified and applied to the retroreflective sheeting of the sign background in accordance with the instructions of the manufacturer of the retroreflective sheeting and shall be applied by heat activation of the adhesive.

The retroreflective sheeting used for characters shall meet or exceed the minimum Specific Intensity Per Unit Area (SIA) of the background sheeting.

465.3 Construction Requirements:

465.3.01 Fabrication:

Fabrication of the sign panels shall be in accordance with the details shown on the plans and the requirements of these specifications. If additional details for sign panel fabrication are required, the contractor shall submit shop drawings in accordance with the requirements of Subsection 105.03.

Panels shall be cut to size and shape and shall be free of buckles, warps, dents, cockles, burrs and defects resulting from fabrication.

Fabricated signs shall be stored indoors and kept dry during storage. If packaged signs become wet, all packaging material shall be removed immediately and the signs allowed to dry. The signs may be repackaged using new dry materials. If outdoor storage is necessary, all packaging materials shall be removed. Signs shall be stored on edge, above ground, in an area where dirt and water will not contact the sign face. Materials used to support stored signs shall not contact sign faces.

465.3.02 Installation of Sign Panels:

The sign panels shall be installed on overhead sign structures and roadside sign supports in accordance with the details shown on the plans and in accordance with the recommendations of the manufacturers of the sign panel components.

Minor scratches and abrasions resulting from fabrication, shipping and installation of panels may be patched; however, patching shall be limited to one patch per 50 square feet of sign area with the total patched area being less than five percent of the sign area. Panels requiring more patching than the specified limit will be rejected. Patches shall be edge sealed by a method approved by the retroreflective sheeting manufacturer.

The heads of bolts on the panel face shall be anodized or painted to match the background or legend

color in which they are placed. The nylon washers on the panel face shall be the color of, or shall be painted to match, the background or legend color in which they are placed. The sign manufacturer's name and date of installation shall be placed on the back of each sign in black, one-inch block letters. Use of felt markers for this purpose will not be permitted. Bolts shall be tightened from the back by holding the bolt head stationary on the face of the panel. Twisting of the bolt head on the panel face will not be allowed.

The contractor shall provide two copies of a detailed list of all new signs installed on the project to the Engineer. The list shall include the sign identification code, the date each sign was installed (month and year), the fabricator of the sign, and the materials used to make the sign (manufacturer, type of sheeting, ink and film). The list shall be provided in a commonly used electronic spreadsheet format, such as EXCEL, and the two copies shall be submitted on either CD-ROM disks or IBM-formatted 3.5-inch floppy diskettes. Signs shall be listed in numerical order by route, direction, and milepost and, where more than one sign is installed at the same general location, a letter subscript.

Signs shall be placed at the same orientation along the roadway so that the entire legend of the signs appear uniform under normal viewing conditions, both day and night.

Upon the installation of each finished sign, the contractor shall place information on the back of the sign showing the sign identification code, the sign fabricator, the manufacturer of the sheeting used, and the month and year of the installation. The formatting of the required information shall be as shown on the plans. The information shall be positioned to be readily visible from a vantage point outside the flow of traffic and not obstructed by sign posts, extrusions, stringers or brackets. All letters shall be made of a long-life material such as a black opaque acrylic film. Signs not marked as required will not be eligible for payment.

Construction signs are exempt from the installation information requirement unless noted otherwise on the project plans.

Bolts shall be tightened from the back of the sign by holding the bolt head stationary on the face of the panel to prevent damage to the sheeting surface.

465.3.03 Miscellaneous Work (Sign Panels):

The work under this section shall also include furnishing all miscellaneous materials, tools, equipment and labor necessary to relocate exit panels to the right side of the parent sign panel; removing, cutting, and installing side trims and new or salvaged aluminum extrusions on existing sign panels; relocating large guide and exit gore signs; and cutting post tops on existing installations, as required on the plans.

465.3.04 Inspection:

An inspection of the completely installed sign panels will be made by the Engineer during the daytime and at night for proper appearance, visibility, color, specular gloss and proper installation. Each sign panel face shall be cleaned thoroughly just prior to the inspection by a method recommended by the manufacturer. The cleaning solvent and cleaning material shall in no way scratch, deface or have any adverse effect on the sign panel components.

All apparent defects disclosed by the inspection shall be corrected by the contractor at no additional cost to the Department. If color variations or blemishes between sign panel increments are visible from a distance of 50 feet either during the day or at night, the panels shall be removed and replaced at no additional cost to the Department.

465.4 Method of Measurement:

Sign panels will be measured by the square foot for each type or types of sign panels furnished and installed. The area of each sign panel, except for warning, regulatory and marker sign panels, will be measured per plans dimensions.

For warning, regulatory and marker sign panels, the area of each sign panel will be measured to the nearest square foot and the areas will be determined as follows:

The areas of each rectangular, square or triangular sign panel will be determined from the dimensions shown on the plans. The area of irregular shaped signs, such as stop signs and route markers, will be determined by multiplying the maximum height in feet by the maximum width in feet, using the dimensions shown on the plans.

DRAFT

Miscellaneous Work (Sign Panels) will be measured on a lump sum basis.

465.5 Basis of Payment:

The accepted quantities of each type of sign panel designated in the bidding schedule, measured as provided above, will be paid for at the contract unit price per square foot, complete in place.

Payment shall be made on the total area of each type of sign panel to the nearest square foot, except Route Shields and EXIT ONLY (For Installation On Sign Panels) which shall be paid for as part of the overall panel.

The contract unit price shall be full compensation for furnishing all labor, materials, tools, equipment and incidentals, and for performing all the work involved in furnishing and installing the sign panels, complete in place, including furnishing and applying all retroreflective sheeting, all fastening hardware, all necessary sign supports, stringers and post ties, all as shown on the plans and as specified herein.

The accepted quantities of Miscellaneous Work (Sign Panels), measured as provided above will be paid for at the contract lump sum price, which price shall be full compensation for the work complete in place as shown on the plans and as described and specified herein.

Part 400 add the following new Section:

SECTION 470
TRAFFIC SIGNAL AND INTERSECTION LIGHTING SYSTEMS

463.1 Description:

The work under this section shall consist of applying and furnishing all materials at the location shown on the project plans in accordance with applicable Arizona Department of Transportation Standard Specifications for Road and Bridge Construction, current edition, and any supplemental Technical Bulletins and notices.

SECTION 601
TRENCH EXCAVATION, BACKFILLING AND COMPACTION

601.1 DESCRIPTION, add the following:

Backfill around manholes and junction structures shall comply with requirements of Section 206.4 Structural Backfill.

The work covered by this specification includes the backfilling of utility potholes.

601.4.5 Final Backfill, add the following:

Trenches within existing paved areas, roadway shoulders, and the travelled way of unpaved roadways shall use 1-sack CLSM or 2-sack CLSM for backfill unless use of an alternative material has received prior approval. Utility potholes in existing paved areas or within two feet of pavement shall use 1-sack CLSM or 2-sack CLSM for backfill unless use of an alternative material has received prior approval.

Requests for the use of alternative materials shall include project information such as trench width, trench depth, backfill material source, properties of the proposed backfill material, proposed backfill procedures, and proposed testing.

For trenches and utility potholes within paved areas the CLSM backfill shall extend from twelve inches (12") above the top most conduit to the bottom of the aggregate base as defined for Trench Repair of MAG Detail 200. For trenches and utility potholes within unpaved areas the CLSM backfill shall extend from twelve inches (12") above the top most conduit to six (6) inches below the finished grade, material for the top six (6) inches shall match the existing surfacing.

Add the following new section:

601.4.12 Embedment Zone Material Requirements for HDPE Pipe: Controlled low strength material (CLSM) shall be used within the pipe embedment zone for HDPE pipe. The CLSM shall be 1-sack or 2-sack per Section 728. Placement of the CLSM shall be per Section 604 and extend from the trench foundation to 12 inches above the pipe crown.

Add the following new section:

601.4.13 Allowable Resistivity and pH Values for Material Placed within the Pipe Embedment Zone and Backfill: Material placed within the pipe embedment zone and final backfill area for pipes, pipe-arches, or arches made of metal shall have a value of resistivity not less than 2000 ohm-cm or of the value shown on the project Plans. When resistivity is not shown on the Plans, the material shall have a value of resistivity not less than that of the existing in-place material or 2000 ohm-cm, whichever is greater. Material for all metal pipe installations shall have a pH value between 6.0 and 9.0 inclusive. Material for all concrete or plastic pipe installations shall have a pH value between 6.0 and 12.0. Tests for pH and resistivity shall be in accordance with the requirements of Arizona Test Method 236.

SECTION 710
ASPHALT CONCRETE

710.2 MATERIAL:

710.2.3 Reclaimed Asphalt Pavement (RAP), Replace the third paragraph with the following:

RAP shall not exceed 20% contribution of the aggregate or binder in the base or intermediate courses of arterial streets. RAP shall not exceed 30% contribution of the aggregate or binder in the base or intermediate courses of collector streets.

710.3 MIX DESIGN REQUIREMENTS:

710.3.1 General, add the following:

710.3.1.1 Verification Testing: The Engineer may conduct tests to verify the laboratory air voids using the submitted target binder content and design gradation. If the resulting air voids is outside the required range, the Contractor shall make adjustments on the binder content to gain compliance with the air voids requirement. The Contractor shall make available samples of the proposed aggregate and binder to conduct verification testing by the Engineer.

SECTION 728
CONTROLLED LOW STRENGTH MATERIAL

728.4 MIXING, add the following:

The project identification used to obtain the Engineer's pre-approval for dry batched unmixed CLSM shall be on the batch weight records.

SECTION 738
HIGH DENSITY POLYETHYLENE PIPE & FITTINGS FOR STORM DRAIN & SANITARY SEWER

Section 738.1 is modified as follows:

HDPE pipe size shall be limited to sizes 8-inch through 60-inch diameter. Sizes greater than 60-inch diameter shall not be used within Cochise County rights-of-way without specific written approval from Cochise County.

SECTION 740
POLYPROPYLENE PIPE & FITTINGS FOR STORM DRAIN, IRRIGATION & SANITARY SEWER

Polypropylene pipe (PP) shall not be used within Cochise County rights-of-way without specific written approval from Cochise County.

SECTION 771
GALVANIZING

771.4 REPAIR OF GALVANIZED SURFACES, replace with the following:

Unless otherwise specified, where galvanized surfaces are field or shop cut, broken, burned, or abraded, thus breaking the galvanizing, the locations thus damaged shall be repaired to the

satisfaction of the Engineer with zinc dust-zinc oxide coating conforming to the Repair of Damaged Coatings section of AASHTO M-36.

DRAFT

RESOLUTION 17-___

TO ADOPT THE COCHISE COUNTY ROAD DESIGN AND CONSTRUCTION STANDARDS AND SPECIFICATIONS FOR PUBLIC IMPROVEMENTS

WHEREAS, the Board of Supervisors is authorized to lay out, maintain, control and manage the public roads and bridges within its jurisdiction, A.R.S. §11-251(4); and

WHEREAS, the Board of Supervisors adopted standard roadway and engineering drawings and specifications on August 21, 1974, per Resolution #74-23, and have adopted revisions and amendments to those Road Design and Construction Standards since that time as per Resolutions #94-48, #03-31, #04-51, #05-19, #05-81; and #16-10; and

WHEREAS, the Federal Highway Administration has developed a system of road classifications and standards that recognize the need for a variety of roadway designations that are responsive to specific site conditions and travel needs; and

WHEREAS, the Board of Supervisors recognize a need to continually update standards and specifications to address current and future infrastructure needs of the County; and

WHEREAS, the Highway Department has updated the "Road Design and Construction Standards and Specifications for Public Improvements" to address roadway typical sections and standards for very low volume, context sensitive and rural roadways, has made revisions to incorporate currently adopted Floodplain Regulation standards for drainage improvements, has revised standards and specifications to incorporate current national and state standards, as well as engineering best practices, in order to guide consistent roadway construction appropriate for specific site conditions and travel needs in a cost effective manner that meet or exceed recommended safety standards in Cochise County,

NOW, THEREFORE, BE IT RESOLVED THAT the updated "Cochise County Road Design and Construction Standards and Specifications for Public Improvements," as set forth in Attachment A, are hereby adopted.

BE IT FURTHER RESOLVED THAT the County Engineer is directed to uniformly apply these standards and specifications to major improvements and to new construction of public roads within the County.

BE IT FURTHER RESOLVED THAT the County Engineer is directed to incorporate minor revisions to roadway typical sections, detail drawings, construction standards or

specifications as needed to comply with revisions in nationally recognized standards and procedures.

BE IT FURTHER RESOLVED THAT Resolutions #05-81 and #16-10 are hereby rescinded; that the prior standards are hereby superseded by the standards and specifications adopted herein and that all standards and specifications adopted by any other prior Resolutions or Ordinances are hereby amended to the extent that they may be in conflict with those adopted by this Resolution.

ADOPTED by the Cochise County Board of Supervisors this _____ day of _____, 2017.

_____
Ann English, Chairman
Cochise County Board of Supervisors

ATTEST:

_____
Arlethe G. Rios,
Clerk of the Board

APPROVED AS TO FORM:

_____
Britt W. Hanson,
Chief Civil Deputy

Cochise County ROAD DESIGN STANDARDS

Kimley»Horn

PUBLIC OUTREACH: DESIGN STANDARDS UPDATE 2017

Technical documents, such as the County's Road Design & Construction Standards & Specifications for Public Improvements, are typically guided by input from engineering staff with support from partner agencies. This 2017 update effort included a broader outreach effort: both to solicit feedback but also to inform design engineers and contractors that frequently work in Cochise County that a substantive update of the County's Design Standards was underway. Outreach consisted of four major elements:

- Posting preliminary and final drafts on the County's website with an interactive web comment form. The County also posted on their front page to boost the exposure to a more general audience. Website posting began on July 11th – 6 weeks before intended adoption by the Board.
- Providing presentations and outreach flyers to groups. This effort reached regional agencies, professional engineers and contractors such as SEAGO (*July*), Roads and Streets Conference- County Booth *(April),* Southeastern Az. Contractors Association *(July)*.
- Providing outreach flyers with website links via listserves and at various meetings such as the Planning and Zoning Commission, SVMPO, American Public Works Association AZ Chapter; American Council of Engineering Companies, AZ Chapter
- Individualized outreach by e-mail, phone and in person to targeted agencies, contractors, consulting firms or individuals that frequently work within the County including ADOT: Traffic Engineering and Southcentral & Southeast Districts



Individual contacts were made with the following firms: APS Chip-Sealing and Paving; Dibble Engineering; EEC Corp; GRANITE Construction; Hunter Contractors; JACOBS; KE&G; Rummell Construction; Stantec; SWP Contractors; Tucson Asphalt, Zia Engineering & Environmental

OUTREACH COMMENTS & RESOLUTION

We received back detailed comments from our ADOT partners and one professional engineer working with JACOBS. Minor comments were received from the City of Nogales Engineer and a number of verbal comments from professional engineers that discussed the update with us at meetings or by phone. Several comments were provided about the structural section for roadways with higher freight volumes and we increased our structural section for commercial/industrial roads as a result. All comments received were discussed with staff and our consultant engineer and, in almost all cases, revisions were made to either clarify the document or to accept the suggested change.

We also received a half a dozen specific remarks that the document was easy to read, "like a story", and was clearly organized. One ADOT engineer commented that he really liked that all the elements were organized into one document instead of multiple documents that addressed specifications separately than design or details. Engineers working for other jurisdictions have asked for specific details: the County's designs for survey markers, swing flood gates and the unpaved minor access local road standard. In addition, several jurisdictions in SEAGO are considering using our update to either adopt or revise their own Road Design Standards.

WEBSITE POSTING FOR PUBLIC REVIEW

The adopted version will be converted into a searchable PDF and made available on-line at: **https://www.cochise.az.gov/highway-and-floodplain/transportation-planning** and linked to appropriate Highway Dept. webpages.

THANK YOU FOR YOUR INTEREST IN THE DESIGN STANDARD UPDATE
Public Programs...Personal Service

COCHISE COUNTY

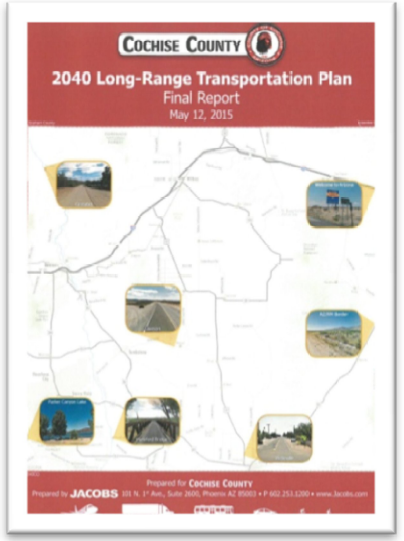
DESIGN STANDARDS UPDATE

Road Design & Construction Standards & Specifications for Public Improvements

AUGUST 22, 2017

Public Programs…Personal Service

Background



Provides for consistent design standards and specifications for the County's roadway network.

Supports the Strategic Plan Goal to prudently manage and preserve the County's infrastructure investments.

Completes the Long-Range Transportation Plan goal to amend the Design Standards to include more options for lower volume roads.

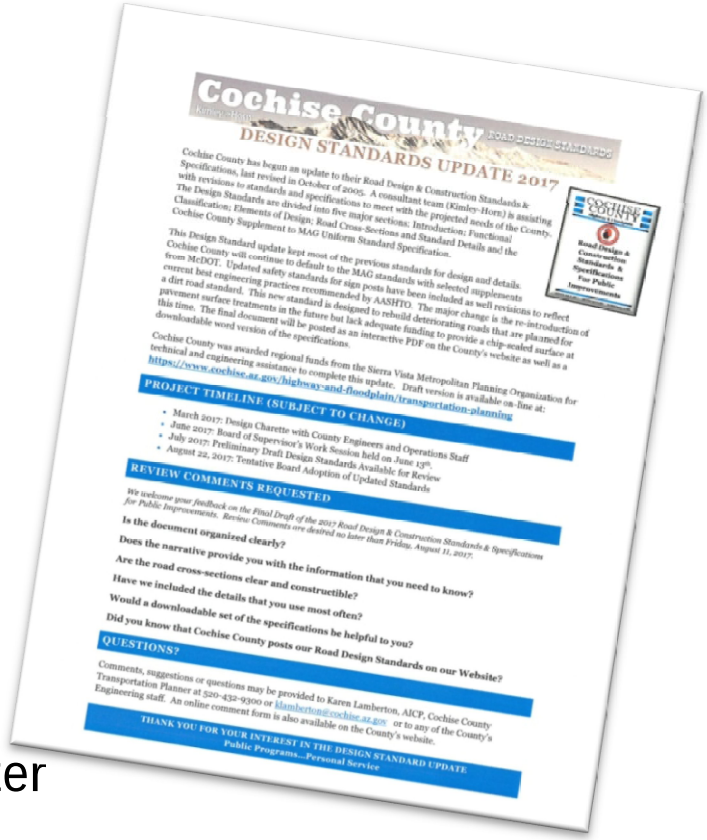
Board Work Session Held on June 13, 2017

Updates the Design Standards to current national and state standards and desired specifications for roadway construction.



Public Outreach

Outreach on the preliminary draft Road Design & Construction Standards & Specifications for Public Improvements included:


Cochise County

DESIGN STANDARDS UPDATE 2017

Cochise County has begun an update to their Road Design & Construction Standards & Specifications, last revised in October of 2005. A consultant team (Kimley-Horn) is assisting with revisions to standards and specifications to meet with the projected needs of the County. The Design Standards are divided into five major sections: Introduction; Functional Classification; Elements of Design; Road Cross-Sections and Standard Details and the Cochise County Supplement to MAG Uniform Standard Specification.

This Design Standard update kept most of the previous standards for design and details. Cochise County will continue to default to the MAG standards with selected supplements from McDOT. Updated safety standards for sign posts have been included as well revisions to reflect correct best engineering practices recommended by AASHTO. The major change is the re-introduction of a dirt road standard. This new standard is designed to rebuild deteriorating roads that are planned for pavement surface treatments in the future but lack adequate funding to provide a chip-sealed surface at this time. The final document will be posted as an interactive PDF on the County's website as well as a downloadable word version of the specifications.

Cochise County was awarded regional funds from the Sierra Vista Metropolitan Planning Organization for technical and engineering assistance to complete this update. Draft version is available on-line at: https://www.cochise.az.gov/highway-and-floodplain/transportation-planning

PROJECT TIMELINE (SUBJECT TO CHANGE)

- March 2017: Design Charette with County Engineers and Operations Staff
- June 2017: Board of Supervisor's Work Session held on June 13th.
- July 2017: Preliminary Draft Design Standards Available for Review
- August 22, 2017: Tentative Board Adoption of Updated Standards

REVIEW COMMENTS REQUESTED

We welcome your feedback on the Final Draft of the 2017 Road Design & Construction Standards & Specifications for Public Improvements. Review Comments are desired no later than Friday, August 11, 2017.

Is the document organized clearly?

Does the narrative provide you with the information that you need to know?

Are the road cross-sections clear and constructible?

Have we included the details that you use most often?

Would a downloadable set of the specifications be helpful to you?

Did you know that Cochise County posts our Road Design Standards on our Website?

QUESTIONS?

Comments, suggestions or questions may be provided to Karen Lamberton, AICP, Cochise County Transportation Planner at 520-432-9300 or klamberton@cochise.az.gov or to any of the County's Engineering staff. An online comment form is also available on the County's website.

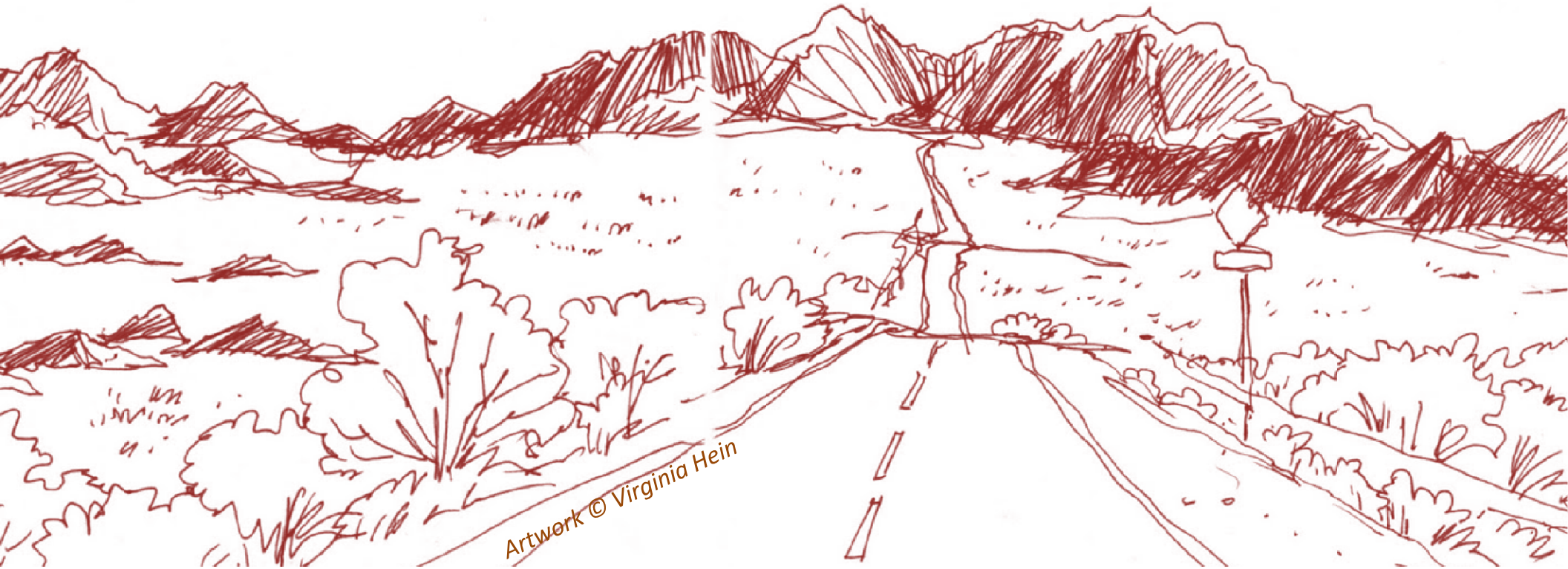
THANK YOU FOR YOUR INTEREST IN THE DESIGN STANDARD UPDATE

Public Programs...Personal Service

- Engineering Design Firms
- Contractors
- Advocacy Groups
- Planning & Zoning Commission
- ADOT – Traffic Engineering and Districts
- SEAGO, SVMPO
- American Public Works Association, AZ chapter
- American Council of Engineering Companies, AZ Chapter
- Roads and Streets Conference – County Booth April 2017
- Southeastern AZ Contractors Association Presentation July 2017

Recommendation

Staff recommend adoption of the 2017 update to the Cochise County Road Design and Construction Standards and Specifications for Public Improvements



Action 11.

Regular Board of Supervisors Meeting **County Schools**

Meeting Date:	08/22/2017		
Substance Abuse Block Grant - Healthy Families/Healthy Youth Pilot Program for Schools			
Submitted By:	Arlethe Rios, Board of Supervisors		
Department:	Board of Supervisors		
Presentation:	No A/V Presentation	**Recommendation:**	Approve
Document Signatures:	BOS Signature NOT Required	**# of ORIGINALS Submitted for Signature:**	3
NAME of PRESENTER:	Rose Martinez	**TITLE of PRESENTER:**	Deputy County School Superintendent
Docket Number (If applicable):			
Mandated Function?:	Federal or State Mandate	**Source of Mandate or Basis for Support?:**	15-301

Information

Agenda Item Text:

Approve Intergovernmental Agreement (IGA) No. SABG-GR-18-070117-02 between the State of Arizona Governor's Office of Youth, Faith, and Family and the Cochise County School Superintendent's Office to provide guidance and direction for five schools for the Healthy Families/Healthy Youth Pilot Program for the period of July 1, 2017 through September 30, 2017 in the amount of $98,835.

Background:

Provide a Substance Abuse Block Grant cost reimbursement grant aware to the Schools Office as a pass thorugh funding to support five events at five middle schools selected by the Schools Office for implementation of the Healthy Families-Healthy Youth Pilot Program.

Department's Next Steps (if approved):

Impact of NOT Approving/Alternatives:

The five middle schools will not be able to be a part of the pilot program.

To BOS Staff: Document Disposition/Follow-Up:

Send 3 documents to the Schools Office.

Attachments

IGA

Cover Letter

INTERGOVERNMENTAL AGREEMENT
NO. IGA-SABG-GR-18-070117-02

Between the

STATE OF ARIZONA
GOVERNOR'S OFFICE OF YOUTH, FAITH AND FAMILY

And the

COCHISE COUNTY SCHOOL SUPERINTENDENT'S OFFICE

This Intergovernmental Agreement ("Agreement") is entered into by and between the State of Arizona, the Governor's Office of Youth, Faith and Family, located at 1700 West Washington, Suite 230, Phoenix, Arizona 85007 ("GOYFF" or "State of Arizona") and the Cochise County School Superintendent's Office, located at 100 Clawson Avenue, P.O. Drawer 208, Bisbee, Arizona 85603 (collectively the "parties").

WHEREAS, the United States Department of Health and Human Services provided funding to the Arizona Department of Health Services under the Substance Abuse Block Grant ("SABG"). The SABG is administered through the Substance Abuse and Mental Health Services Administration of the United States Department of Health and Human Services. The C.F.D.A. number is 93.959.

WHEREAS, the Arizona Department of Health Services provided Substance Abuse Block Grant Funding to the Governor's Office of Youth, Faith and Family under Interagency Service Agreement No. HS632006.

WHEREAS, A.R.S. §41-101.01 authorizes the Governor's Office of Youth, Faith and Family to execute and administer agreements and accept and expend any funds received from the federal government or any agency thereof.

WHEREAS, A.R.S. §11-952 authorizes public agencies to enter into agreements to contract for services.

WHEREAS, A.R.S. §15-301 authorizes the Cochise County School Superintendent's Office to enter into agreements with other governmental entities and agencies in order to receive and spend local, state and federal monies to provide programs and services to school districts, charter schools, county free library districts, and municipal libraries within the county.

THEREFORE, in consideration of the mutual promises and covenants contained herein and other good and valuable consideration, the receipt of which the parties hereby acknowledge, the parties enter into this Agreement as follows:

I. PURPOSE OF AGREEMENT

The purpose of this Agreement is to provide a SABG cost-reimbursement grant award to the Cochise County School Superintendent's Office as pass-through funding to support five events at five middle schools selected by the Cochise County School Superintendent's Office for implementation of the Healthy Families-Healthy Youth Pilot Program.

II. TERM OF AGREEMENT, TERMINATION AND AMENDMENTS

The term of the Agreement shall commence July 1, 2017, and shall remain in effect until September 30, 2017, contingent upon GOYFF's receipt of final federal SABG funding, unless terminated, canceled, or extended as otherwise provided herein.

Either party may terminate this Agreement at any earlier time by providing written notice to the other party at least thirty (30) days prior to the termination date. The GOYFF agrees that regardless of its termination date with the Cochise County School Superintendent's Office, the Cochise County School Superintendent's Office may use the funds distributed under this Agreement to pay for any unpaid services pursuant to this Agreement obligated prior to the date of termination. This Agreement is subject to cancellation pursuant to A.R.S. § 38-511, the provisions of which are incorporated herein.

Amendments to this Agreement shall be made in writing and signed by both parties.

III. DESCRIPTION OF SERVICES

The Cochise County School Superintendent's Office shall:

1. Provide oversight on the Healthy Families-Healthy Youth Pilot Program ("Program") in accordance with Attachment A (entitled *Scope of Work*, incorporated into this Agreement in its entirety); Attachment B (entitled Job Description, Youth Facilitator/Leader, incorporated into this Agreement in its entirety); Attachment C (entitled Job Description, Adult Group Facilitator/Coach, incorporated into this Agreement in its entirety); Attachment D (entitled Reimbursable Budget – Middle School, incorporated into this Agreement in its entirety); and Attachment E (entitled *Federal Terms and Conditions*, incorporated into this Agreement in its entirety).
2. Use the SABG grant award as pass-through funds for five events at five middle schools chosen by the Cochise County School Superintendent's Office to support the Program.
3. Accept and manage the grant funds provided by GOYFF to the County School Superintendent's Office to host the event(s) based on size of 7th grade enrollment. Event participation maximum capacity is 150 participants. Below are sample event attendance:
    i. 50 students and 100 parents/caregivers
    ii. 60 students and 90 parents/caregivers
    iii. 75 students and 75 parents/caregivers*

    *Every student must be accompanied by a parent/caregiver
4. Select and pay a qualified and interested staff person to serve as the Healthy Families Program Coordinator and Data Collection Coordinator (percentage of FTE to be determined by the school). See attached job descriptions in Attachments B and C.
5. Healthy Families Program Coordinator will remain a family resource at the school who can direct students and/or parents throughout the school year to:
    - www.substanceabuse.az.gov
    - Community Coalitions/Non-profit organization available in their area
6. Identify and select an adequate number of school staff to be trained and serve as Healthy Families Facilitators for the event(s). See attached Job Descriptions.
7. Use the Contracted Services line item in the attached reimbursable budget as guidance to provide for a minimum of two Adult Facilitators and two Youth Facilitators.
8. Also use the Contracted Services budget line item to provide funding for Facilitators to participate in the event and attend one-day training for the program in July and August-September 2017.

9. Reference and use the Contracted Services budget line item to provide funding to support the preparation activities and logistics associated with the event by the School Coordinator and Facilitators.
10. Collaborate with ASU-Southwest Interdisciplinary Research Center (SIRC) to conduct all required evaluation activities.
11. Assist the middle schools and the GOYFF with the submission of programmatic reports and program invoices.

IV. REPORTING REQUIREMENTS

The Cochise County School Superintendent's Office shall submit detailed invoices and programmatic reports detailing all services rendered in accordance with this Agreement on a monthly basis. The reporting deadlines are:

- August 10, 2017
- September 10, 2017
- October 10, 2017

Any due dates that occur on a weekend or holiday shall be due on the following business day.

V. MANNER OF FINANCING

The GOYFF shall:

1. Provide no more than $ $98,835 (which represents $19,767 for each of the five selected schools) to the Cochise County School Superintendent's Office, for costs associated with the activities listed in (i) this Agreement; (ii) Attachment A (entitled *Scope of Work*, incorporated into this Agreement in its entirety); (iii) Attachment B (entitled Job Description Youth Facilitator/Leader, incorporated into this Agreement in its entirety); (iv) Attachment C (entitled Job Description Adult Group Facilitator/Coach, incorporated into this Agreement in its entirety); (v) Attachment D (entitled Reimbursable Budget – Middle School, incorporated into this Agreement in its entirety); and (vi) Attachment E (entitled *Federal Terms and Conditions*, incorporated into this Agreement in its entirety).
2. Provide payment upon receipt and GOYFF's approval of the detailed invoices for services performed or goods received.

The Cochise County School Superintendent's Office shall:

1. Use the SABG funds received from GOYFF exclusively to support the activities outlined in (i) this Agreement; (ii) Attachment A (entitled *Scope of Work*, incorporated into this Agreement in its entirety); (iii) Attachment B (entitled Job Description Youth Facilitator/Leader, incorporated into this Agreement in its entirety); (iv) Attachment C (entitled Job Description Adult Group Facilitator/Coach, incorporated into this Agreement in its entirety); (v) Attachment D (entitled Reimbursable Budget – Middle School, incorporated into this Agreement in its entirety); and (vi) Attachment E (entitled *Federal Terms and Conditions*, incorporated into this Agreement in its entirety).
2. Provide Attachment D to each of the five middle schools. Funding variance requests may be submitted to GOYFF, which shall include the submission of a budget change form. Prior written approval from GOYFF for a funding variance is required.
3. Agree that all reimbursement of in-state travel expenses shall be paid only in accordance with the Domestic Per Diem rates allowed under the State of Arizona Travel Policy, and the prevailing State of Arizona standard mileage rates, located at

https://gao.az.gov/travel/welcome-gao-travel. There shall be no reimbursement of out-of-state travel expenses.

4. All questions regarding the appropriate use of the SABG funds shall be resolved by mutual written agreement between the Cochise County School Superintendent's Office and the GOYFF.

VI. DOCUMENTS INCORPORATED BY REFERENCE

The State of Arizona's Uniform Terms and Conditions V9_ (Rev 7-1-2013) are incorporated into this document as if fully set forth herein. Copies of the Uniform Terms and Conditions may be accessed at https://spo.az.gov/sites/default/files/documents/files/Uniform%20Terms%20and%20Conditions%20V9_%28Rev%207-1-2013%29.pdf. The Cochise County School Superintendent's Office warrants that it has read and understands the Uniform Terms and Conditions V9_ (Rev 7-1-2013) and agrees to be bound by them in their entirety. In the event of any divergence between this Agreement and the Uniform Terms and Conditions, this Agreement shall control. The Uniform Terms and Conditions are incorporated into this Agreement in their entirety as Attachment F.

VII. NON-AVAILABILITY OF FUNDS

In accordance with A.R.S. § 35-154, every payment obligation of the GOYFF under the Agreement is conditioned upon the availability of funds appropriated or allocated for payment of such obligation. If funds are not allocated and available for the continuance of this Agreement, this Agreement may be terminated by the GOYFF at the end of the period for which funds are available. No liability shall accrue to GOYFF/Arizona Office of the Governor in the event this provision is exercised, and the GOYFF/Arizona Office of the Governor shall not be obligated or liable for any future payments or for any damages as a result of termination under this paragraph.

VIII. INDEMNIFICATION

To the fullest extent permitted by law, the Cochise County School Superintendent's Office shall defend, indemnify, and hold harmless the State of Arizona, GOYFF, the Governor's Office, and all of their departments, agencies, boards, commissions, universities, officers, officials, agents, and employees (hereinafter referred to as "Indemnitee") from and against any and all claims, actions, liabilities, damages, losses, or expenses (including court costs, attorneys' fees, and costs of claim processing, investigation and litigation) (hereinafter referred to as "Claims") for bodily injury or personal injury (including death), or loss or damage to tangible or intangible property caused, or alleged to be caused, in whole or in part, by the negligent or willful acts or omissions of the Cochise County School Superintendent's Office or any of its owners, officers, directors, agents, employees, contractors, or subcontractors. This indemnity includes any claim or amount arising out of, or recovered under, the Workers' Compensation Law or arising out of the failure of such the Cochise County School Superintendent's Office to conform to any federal, state, or local law, statute, ordinance, rule, regulation, or court decree. It is the specific intention of the parties that the Indemnitee shall, in all instances, except for Claims arising solely from the negligent or willful acts or omissions of the Indemnitee, be indemnified by the Cochise County School Superintendent's Office from and against any and all claims. It is agreed that the Cochise County School Superintendent's Office will be responsible for primary loss investigation, defense, and judgment costs where this indemnification is applicable. In consideration of the award of this Agreement, the Cochise County School Superintendent's Office agrees to waive all rights of subrogation against the State of Arizona, GOYFF, the Governor's Office, and all of their officers, officials, agents, and employees for losses arising from the work performed by the Cochise County School Superintendent's Office for the State of Arizona.

IX. INSURANCE

The Cochise County School Superintendent's Office is a public entity and shall provide a certificate of self-insurance.

X. OTHER

It is agreed that the parties to this Agreement have participated fully in the negotiation and preparation of the Agreement. Any rule of construction to the effect that ambiguities are to be resolved against the drafting party shall not apply in interpreting this Agreement. The parties acknowledge they have been advised by counsel, or have had the opportunity to be advised by counsel, in the negotiation and execution of the Agreement.

The parties agree to follow all applicable laws, rules and regulations in the performance of work in furtherance of the Substance Abuse Block Grant initiative and this Agreement.

XI. NOTICES

The Cochise County School Superintendent's Office shall address all notices relative to this Agreement to:

Nikki Lazarus Green
Program Administrator
Governor's Office of Youth, Faith and Family
1700 West Washington, Suite 230
Phoenix, Arizona 85007

The GOYFF shall address all notices relative to this Agreement to:

Jacqui Clay
Cochise County School Superintendent
100 Clawson Avenue
P.O. Drawer 208
Bisbee, Arizona 85603

IN WITNESS WHEREOF, the parties hereto agree to execute this Agreement.

COCHISE COUNTY SCHOOL SUPERINTENDENT'S OFFICE

Jacqui Clay — Date
Cochise County
School Superintendent

GOVERNOR'S OFFICE OF YOUTH, FAITH AND FAMILY

Samuel Burba — 7/28/17 — Date
Interim Director

Travis Price — 7/28/17 — Date
Compliance Finance and Procurement Manager
Office of the Governor

Scope of Work:

(Insert School name here) will:

1. Accept and manage the grant funds provided by GOYFF to the County School Superintendent's Office to host the event(s) based on size of 7th grade enrollment. Event participation maximum capacity is 150 participants. Below are sample event attendance:

    i. 50 students and 100 parents/caregivers

    ii. 60 students and 90 parents/caregivers

    iii. 75 students and 75 parents/caregivers*

    *Every student must be accompanied by a parent/caregiver

2. Select and pay a qualified and interested staff person to serve as the Healthy Families – Healthy Youth Program Coordinator and Data Collection Coordinator(percentage of FTE to be determined by the school). See attached job descriptions.

3. Healthy Families – Healthy Youth Program Coordinator will remain a family resource at the school who can direct students and/or parents throughout the school year to:

    i. www.substanceabuse.az.gov

    ii. Community Coalitions/Non-profit organization available in their area

4. Identify and select an adequate number of school staff to be trained and serve as Healthy Families – Healthy Youth Facilitators for the event(s). See attached Job Descriptions.

    i. Contract Services should be provided for a minimum (2) each; Adult Facilitators and Youth Facilitators.

5. Contract Services funding may be provided for Facilitators to participate in the event and attend one-day training for the program in July and August-September 2017.

6. Contract Services funding may also be provided for preparation activities and logistic associated with the event by School Coordinator and Facilitators.

7. Collaborate with ASU-Southwest Interdisciplinary Research Center (SIRC) to conduct all required evaluation activities.

JOB DESCRIPTION

Youth Facilitator/Leader

Position Description

This position will be responsible for the delivery and facilitation of Healthy Families-Healthy Youth program for youth participating in the program.

The preferred candidate will be 18-30 years of age and/or the ability to connect with youth. The Facilitator will have a working knowledge of prevention principles; experience working with youth, and demonstrate public speaking and facilitation skills needed to convey messages and enlist participation.

Specific Duties

- Complete 8-hour training demonstrate competency in the delivery of the prevention curriculum.
- Assist the school staff in the planning and program set-up activities as directed.
- Deliver prevention education sessions with youth in accordance with the designated curriculum.
- Assist with the Adult Facilitator with youth/parent-caregiver dialogue and completion of the *Keep Them Safe* prevention plan.
- Participate in evaluation activities as directed.

Necessary Skills

- Ability to effectively engage and work with youth
- Ability to lead and motivate large group
- Strong time management skills
- Strong presentation skills
- Strong facilitation skills
- Working knowledge of prevention principles
- Working knowledge of issues related to substance use
- Ability to communicate clearly and concisely
- Ability to be flexible when working with individuals and groups
- Ability to complete projects independently

JOB DESCRIPTION

Adult Group Facilitator/Coach

Position Description

This position will be responsible for the delivery and facilitation of Healthy Families-Healthy Youth program for parents/caregivers. This position will also be responsible for leading in-depth discussion concerning substance use and family prevention strategies.

The preferred candidate will demonstrate strong public speaking skills needed to facilitate group discussion concerning prevention strategies.

Specific Duties

- Complete 8-hour training and demonstrate competency in the facilitation of the prevention curriculum.
- Assist the school staff in the planning and event set-up activities as directed.
- Deliver parent/caregiver prevention education sessions.
- Facilitate youth/parent-caregiver dialogue and *Keep Them Safe* prevention plan.
- Complete program documentation in a timely manner.
- Participate in all evaluation activities as directed.

Necessary Skills

- Strong time management skills
- Ability to lead and motivate large groups
- Knowledge of risk and protective factors
- Ability to effectively engage and work with diverse populations
- Strong presentation skills
- Strong facilitation skills
- Ability to communicate clearly and concisely
- Ability to be flexible when working with individuals and groups
- Ability to complete projects independently

ATTACHMENT D

REIMBURSABLE BUDGET – Middle School

Category	Description	Amount
Personnel/ Contracted Services	School Coordinator .30% @ $46,000 ($46,000 x .30% X 3 months = $3,450.00) Point of contact for the Middle School and oversight for the pilot program. Liaison to the County Superintendent Coordinator. Data Analysis Coordinator .30% @ $46,000 ($46,000 x .30% X 3 months = $3,450.00) Point of contact for the Middle School and oversight for the financial/programmatic reporting. Liaison to the County Superintendent Coordinator.	$3,450.00 $3,450.00
Fringe/ERE	Employee related expenses are approximately 30% of the salaries including health benefits	$2,070.00
Contracted Services	Facilitator fees for (1) day training, (1) event. All preparation activities and logistics associated: Adult Facilitators (2) and Youth Facilitators (2). $1,250/Facilitator = $750 for training day + $500 for event night. (1) Youth Facilitator $500 for event night.	$5,500.00
Supplies	Program materials –copies, youth folders, pens, pencils, Outreach materials	$2,000.00
Facilities	Event Costs- Family Dinner 150 attendees @ $10.00 each	$1,500.00
	Sub-Total	**$17,970.00**
Indirect	10% of Direct Expenses or Federally Approved Indirect Rate	$1,797.00
	Total Project Costs	**$19,767.00**

ATTACHMENT E
FEDERAL TERMS AND CONDITIONS

I. KEY PERSONNEL

It is essential that the Cochise County School Superintendent's Office train and provide adequate, experienced personnel, capable of and devoted to the successful accomplishment of projects that may be performed under this Agreement. The Cochise County School Superintendent's Office must agree to assign experienced individuals to project positions.

A. The Cochise County School Superintendent's Office agrees that, once assigned to work on a project under this Agreement, key personnel should not be removed or replaced without prior written notice to the GOYFF.
B. If key personnel are not available for work on a specific project, for a continuous period exceeding thirty (30) calendar days, or are expected to devote substantially less effort to the work than initially anticipated, the Cochise County School Superintendent's Office shall immediately notify the GOYFF Program Administrator and shall, subject to the concurrence of the GOYFF, replace such personnel with personnel of substantially equal ability and qualifications.
C. The Cochise County School Superintendent's Office shall assign specific individuals to the key programmatic and fiscal positions and other changes to key personnel, specifically the Cochise County School Superintendent's Office's SABG Coordinator must be reported on or before the effective date of such change to the GOYFF.

II. HEALTH INSURANCE PORTABILITY AND ACCOUNTABILITY ACT ("HIPAA") OF 1996

A. The Cochise County School Superintendent's Office warrants that it is familiar with the requirements of HIPAA, as amended by the Health Information Technology for Economic and Clinical Health Act ("HITECH ACT") of 2009, and accompanying regulations and will comply with all applicable HIPAA requirements in the course of this Agreement. Cochise County School Superintendent's Office warrants that it will cooperate with the GOYFF in the course of performance of the Agreement so that both GOYFF and the Cochise County School Superintendent's Office will be in compliance with HIPAA, including cooperation and coordination with the Arizona Department of Administration-Arizona Strategic Enterprise Technology ("ADOA-ASET") Office, the ADOA-ASET Arizona State Chief Information Security Office and HIPAA Coordinator and other compliance officials required by HIPAA and its regulations. The Cochise County School Superintendent's Office will sign any documents that are reasonably necessary to keep GOYFF and the Cochise County School Superintendent's Office in compliance with HIPAA, including, but not limited to, business associates agreements.

B. If required by the GOYFF, the Cochise County School Superintendent's Office agrees to sign a "Pledge to Protect Confidential Information" and to abide by the statements addressing the creation, use and disclosure of confidential information, including information designated as protected health information and all other confidential or sensitive information as defined in policy. In addition, if requested, the Cochise County School Superintendent's Office agrees to attend or participate in HIPAA training offered by the GOYFF or to provide written verification that the Cochise County School Superintendent's Office has attended or participated in job related HIPAA training that is (1) intended to make the Cochise County School Superintendent's Office proficient in HIPAA for purposes of performing the services required and (2) presented by a HIPAA Privacy Officer or other person or program knowledgeable and experienced in HIPAA and who has been approved by the ADOA-ASET Arizona State Chief Information Security Officer and HIPAA Coordinator.

III. AGREEMENT RENEWAL

The Agreement shall not bind nor purport to bind the GOYFF for any contractual commitment in excess of the original Agreement period or amount. The GOYFF shall have the right, at its sole and unfettered discretion, whether or not to extend this Agreement. If so, the parties must execute a written amendment or a new contract. Consideration for renewal will also be based on results of program and fiscal monitoring.

IV. FUND MANAGEMENT

The Cochise County School Superintendent's Office must maintain funds received under this Agreement in separate ledger accounts and cannot mix these funds with other sources. The Cochise County School Superintendent's Office must manage funds according to applicable federal regulations for administrative requirements, cost principles and audits.

The Cochise County School Superintendent's Office must maintain adequate business systems to comply with federal requirements. The business systems that must be maintained are:

- Financial Management
- Procurement
- Personnel
- Property
- Travel

A system is adequate if it is: 1) written; 2) consistently followed - it applies in all similar circumstances; and 3) consistently applied – it applies to all sources of funds. The GOYFF reserves the right to review all business systems policies.

V. DUNS/CCR

Each successful recipient who is awarded funding must provide the following prior to an Agreement being executed: (a) Dun and Bradstreet Universal Numbering System (DUNS) number for the fiscal agent; and (b) proof of current registration in the Central Contractor Registration (CCR) database. Additionally, CCR registration must be maintained for the term of the Agreement. The DUNS website is located at http://fedgov.dnb.com/webform. The CCR registration information may be found at https://www.sam.gov/portal/public/SAM/.

VI. FFATA REPORTING REQUIREMENTS

The Cochise County School Superintendent's Office is required to provide certain information pursuant to the Federal Funding Accountability and Transparency Act of 2006 reporting requirements (Pub. L. No. 109-282, as amended by Section 6205 (a) of Pub. L. No. 110-252) "FFATA"). FFATA requires that certain information on federal awards (federal financial assistance and expenditures) be made available to the public via a single, searchable website, which is www.USASpending.gov.

VII. PUBLIC HEALTH LAW

Comply with all Public Health Law at http://www.samhsa.gov/grants/block-grants/laws-regulations and Terms and Conditions of Notice of Grant Award including, but not limited, to:

A. Confidentiality of Alcohol and Drug Patient Records (42 C.F.R. Part 2);
B. Charitable Choice Provisions; Final Rule (42 C.F.R. Part 54 and 54a);
C. Substance Abuse Prevention and Treatment Block Grant; Interim Final Rule (45 C.F.R. 96.45, 96.51, and 96.120-121);
D. Health Omnibus Programs Extension Act of 1988, Subtitle E General Provisions, November 4, 1988 (P.L. 100-607) [.pdf] (42 U.S.C. 300ee-5);
E. Children's Health Act of 2000 [P.L. 106310], October 17, 2000;
F. ADAMHA Reorganization Act of 1992 [P.L. 102-321], July 10, 1992; and
G. Public Health Service Act [includes Title V and Title XIX].

Attachment F

UNIFORM TERMS AND CONDITIONS
Version 9

1. Definition of Terms

As used in this Solicitation and any resulting Contract, the terms listed below are defined as follows:

1.1. *"Attachment"* means any item the Solicitation requires the Offeror to submit as part of the Offer.

1.2. *"Contract"* means the combination of the Solicitation, including the Uniform and Special Instructions to Offerors, the Uniform and Special Terms and Conditions, and the Specifications and Statement or Scope of Work; the Offer and any Best and Final Offers; and any Solicitation Amendments or Contract Amendments.

1.3. *"Contract Amendment"* means a written document signed by the Procurement Officer that is issued for the purpose of making changes in the Contract.

1.4. *"Contractor"* means any person who has a Contract with the State.

1.5. *"Days"* means calendar days unless otherwise specified.

1.6. *"Exhibit"* means any item labeled as an Exhibit in the Solicitation or placed in the Exhibits section of the Solicitation.

1.7. *"Gratuity"* means a payment, loan, subscription, advance, deposit of money, services, or anything of more than nominal value, present or promised, unless consideration of substantially equal or greater value is received.

1.8. *"Materials"* means all property, including equipment, supplies, printing, insurance and leases of property but does not include land, a permanent interest in land or real property or leasing space.

1.9. *"Procurement Officer"* means the person, or his or her designee, duly authorized by the State to enter into and administer Contracts and make written determinations with respect to the Contract.

1.10. *"Services"* means the furnishing of labor, time or effort by a contractor or subcontractor which does not involve the delivery of a specific end product other than required reports and performance, but does not include employment agreements or collective bargaining agreements.

1.11. *"Subcontract"* means any Contract, express or implied, between the Contractor and another party or between a subcontractor and another party delegating or assigning, in whole or in part, the making or furnishing of any material or any service required for the performance of the Contract.

1.12. *"State"* means the State of Arizona and Department or Agency of the State that executes the Contract.

1.13. *"State Fiscal Year"* means the period beginning with July 1 and ending June 30.

2. Contract Interpretation

2.1. Arizona Law. The Arizona law applies to this Contract including, where applicable, the Uniform Commercial Code as adopted by the State of Arizona and the Arizona Procurement Code, Arizona Revised Statutes (A.R.S.) Title 41, Chapter 23, and its implementing rules, Arizona Administrative Code (A.A.C.) Title 2, Chapter 7.

2.2. Implied Contract Terms. Each provision of law and any terms required by law to be in this Contract are a part of this Contract as if fully stated in it.

2.3. Contract Order of Precedence. In the event of a conflict in the provisions of the Contract, as accepted by the State and as they may be amended, the following shall prevail in the order set forth below:

2.3.1. Special Terms and Conditions;

2.3.2. Uniform Terms and Conditions;

2.3.3. Statement or Scope of Work;

2.3.4. Specifications;

2.3.5. Attachments;

2.3.6. Exhibits;

2.3.7. Documents referenced or included in the Solicitation.

2.4. Relationship of Parties. The Contractor under this Contract is an independent Contractor. Neither party to this Contract shall be deemed to be the employee or agent of the other party to the Contract.

2.5. Severability. The provisions of this Contract are severable. Any term or condition deemed illegal or invalid shall not affect any other term or condition of the Contract.

2.6. No Parole Evidence. This Contract is intended by the parties as a final and complete expression of their agreement. No course of prior dealings between the parties and no usage of the trade shall supplement or explain any terms used in this document and no other understanding either oral or in writing shall be binding.

2.7. No Waiver. Either party's failure to insist on strict performance of any term or condition of the Contract shall not be deemed a waiver of that term or condition even if the party accepting or acquiescing in the nonconforming performance knows of the nature of the performance and fails to object to it.

3. Contract Administration and Operation

3.1. Records. Under A.R.S. § 35-214 and § 35-215, the Contractor shall retain and shall contractually require each subcontractor to retain all data and other "records" relating to the acquisition and performance of the Contract for a period of five years after the completion of the Contract. All records shall be subject to inspection and audit by the State at reasonable times. Upon request, the Contractor shall produce a legible copy of any or all such records.

3.2. Non-Discrimination. The Contractor shall comply with State Executive Order No. 2009-09 and all other applicable Federal and State laws, rules and regulations, including the Americans with Disabilities Act.

3.3. Audit. Pursuant to ARS § 35-214, at any time during the term of this Contract and five (5) years thereafter, the Contractor's or any subcontractor's books and records shall be subject to audit by the State and, where applicable, the Federal Government, to the extent that the books and records relate to the performance of the Contract or Subcontract.

3.4. Facilities Inspection and Materials Testing. The Contractor agrees to permit access to its facilities, subcontractor facilities and the Contractor's processes or services, at reasonable times for inspection of the facilities or materials covered under this Contract.

The State shall also have the right to test, at its own cost, the materials to be supplied under this Contract. Neither inspection of the Contractor's facilities nor materials testing shall constitute final acceptance of the materials or services. If the State determines non-compliance of the materials, the Contractor shall be responsible for the payment of all costs incurred by the State for testing and inspection.

3.5. Notices. Notices to the Contractor required by this Contract shall be made by the State to the person indicated on the Offer and Acceptance form submitted by the Contractor unless otherwise stated in the Contract. Notices to the State required by the Contract shall be made by the Contractor to the Solicitation Contact Person indicated on the Solicitation cover sheet, unless otherwise stated in the Contract. An authorized Procurement Officer and an authorized Contractor representative may change their respective person to whom notice shall be given by written notice to the other and an amendment to the Contract shall not be necessary.

3.6. Advertising, Publishing and Promotion of Contract. The Contractor shall not use, advertise or promote information for commercial benefit concerning this Contract without the prior written approval of the Procurement Officer.

3.7. Property of the State. Any materials, including reports, computer programs and other deliverables, created under this Contract are the sole property of the State. The Contractor is not entitled to a patent or copyright on those materials and may not transfer the patent or copyright to anyone else. The Contractor shall not use or release these materials without the prior written consent of the State.

3.8. Ownership of Intellectual Property. Any and all intellectual property, including but not limited to copyright, invention, trademark, trade name, service mark, and/or trade secrets created or conceived pursuant to or as a result of this contract and any related subcontract ("Intellectual Property"), shall be work made for hire and the State shall be considered the creator of such Intellectual Property. The agency, department, division, board or commission of the State of Arizona requesting the issuance of this contract shall own (for and on behalf of the State) the entire right, title and interest to the Intellectual Property throughout the world. Contractor shall notify the State, within thirty (30) days, of the creation of any Intellectual Property by it or its subcontractor(s). Contractor, on behalf of itself and any subcontractor(s), agrees to execute any and all document(s) necessary to assure ownership of the Intellectual Property vests in the State and shall take no affirmative actions that might have the effect of vesting all or part of the Intellectual Property in any entity other than the State. The Intellectual Property shall not be disclosed by contractor or its subcontractor(s) to any entity not the State without the express written authorization of the agency, department, division, board or commission of the State of Arizona requesting the issuance of this contract.

3.9. Federal Immigration and Nationality Act. The contractor shall comply with all federal, state and local immigration laws and regulations relating to the immigration status of their employees during the term of the contract. Further, the contractor shall flow down this requirement to all subcontractors utilized during the term of the contract. The State shall retain the right to perform random audits of contractor and subcontractor records or to inspect papers of any employee thereof to ensure compliance. Should the State determine that the contractor and/or any subcontractors be found noncompliant, the State may pursue all remedies allowed by law, including, but not limited to; suspension of work, termination of the contract for default and suspension and/or debarment of the contractor.

3.10 E-Verify Requirements. In accordance with A.R.S. § 41-4401, Contractor warrants compliance with all Federal immigration laws and regulations relating to employees and warrants its compliance with Section A.R.S. § 23-214, Subsection A.

3.11 Offshore Performance of Work Prohibited.
Any services that are described in the specifications or scope of work that directly serve the State of Arizona or its clients and involve access to secure or sensitive data or personal client data shall be performed within the defined territories of the United States.

Unless specifically stated otherwise in the specifications, this paragraph does not apply to indirect or 'overhead' services, redundant back-up services or services that are incidental to the performance of the contract. This provision applies to work performed by subcontractors at all tiers.

4. Costs and Payments

4.1. Payments. Payments shall comply with the requirements of A.R.S. Titles 35 and 41, Net 30 days. Upon receipt and acceptance of goods or services, the Contractor shall submit a complete and accurate invoice for payment from the State within thirty (30) days.

4.2. Delivery. Unless stated otherwise in the Contract, all prices shall be F.O.B. Destination and shall include all freight delivery and unloading at the destination.

4.3. Applicable Taxes.

4.3.1. Payment of Taxes. The Contractor shall be responsible for paying all applicable taxes.

4.3.2. State and Local Transaction Privilege Taxes. The State of Arizona is subject to all applicable state and local transaction privilege taxes. Transaction privilege taxes apply to the sale and are the responsibility of the seller to remit. Failure to collect such taxes from the buyer does not relieve the seller from its obligation to remit taxes.

4.3.3. Tax Indemnification. Contractor and all subcontractors shall pay all Federal, state and local taxes applicable to its operation and any persons employed by the Contractor. Contractor shall, and require all subcontractors to hold the State harmless from any responsibility for taxes, damages and interest, if applicable, contributions required under Federal, and/or state and local laws and regulations and any other costs including transaction privilege taxes, unemployment compensation insurance, Social Security and Worker's Compensation.

4.3.4. IRS W9 Form. In order to receive payment the Contractor shall have a current I.R.S. W9 Form on file with the State of Arizona, unless not required by law.

4.4. Availability of Funds for the Next State fiscal year. Funds may not presently be available for performance under this Contract beyond the current state fiscal year. No legal liability on the part of the State for any payment may arise under this Contract beyond the current state fiscal year until funds are made available for performance of this Contract.

4.5. Availability of Funds for the current State fiscal year. Should the State Legislature enter back into session and reduce the appropriations or for any reason and these goods or services are not funded, the State may take any of the following actions:

4.5.1. Accept a decrease in price offered by the contractor;

4.5.2. Cancel the Contract; or

4.5.3. Cancel the contract and re-solicit the requirements.

5. Contract Changes

5.1. Amendments. This Contract is issued under the authority of the Procurement Officer who signed this Contract. The Contract may be modified only through a Contract Amendment within the scope of the Contract. Changes to the Contract, including the addition of work or materials, the revision of payment terms, or the substitution of work or materials, directed by a person who is not specifically authorized by the procurement officer in writing or made unilaterally by the Contractor are violations of the Contract and of applicable law.

Such changes, including unauthorized written Contract Amendments shall be void and without effect, and the Contractor shall not be entitled to any claim under this Contract based on those changes.

5.2. Subcontracts. The Contractor shall not enter into any Subcontract under this Contract for the performance of this contract without the advance written approval of the Procurement Officer. The Contractor shall clearly list any proposed subcontractors and the subcontractor's proposed responsibilities. The Subcontract shall incorporate by reference the terms and conditions of this Contract.

5.3. Assignment and Delegation. The Contractor shall not assign any right nor delegate any duty under this Contract without the prior written approval of the Procurement Officer. The State shall not unreasonably withhold approval.

6. **Risk and Liability**

6.1. Risk of Loss: The Contractor shall bear all loss of conforming material covered under this Contract until received by authorized personnel at the location designated in the purchase order or Contract. Mere receipt does not constitute final acceptance. The risk of loss for nonconforming materials shall remain with the Contractor regardless of receipt.

6.2. Indemnification

6.2.1. Contractor/Vendor Indemnification (Not Public Agency) The parties to this contract agree that the State of Arizona, its departments, agencies, boards and commissions shall be indemnified and held harmless by the contractor for the vicarious liability of the State as a result of entering into this contract. However, the parties further agree that the State of Arizona, its departments, agencies, boards and commissions shall be responsible for its own negligence. Each party to this contract is responsible for its own negligence.

6.2.2. Public Agency Language Only Each party (as 'indemnitor') agrees to indemnify, defend, and hold harmless the other party (as 'indemnitee') from and against any and all claims, losses, liability, costs, or expenses (including reasonable attorney's fees) (hereinafter collectively referred to as 'claims') arising out of bodily injury of any person (including death) or property damage but only to the extent that such claims which result in vicarious/derivative liability to the indemnitee, are caused by the act, omission, negligence, misconduct, or other fault of the indemnitor, its officers, officials, agents, employees, or volunteers."

6.3. Indemnification - Patent and Copyright. The Contractor shall indemnify and hold harmless the State against any liability, including costs and expenses, for infringement of any patent, trademark or copyright arising out of Contract performance or use by the State of materials furnished or work performed under this Contract. The State shall reasonably notify the Contractor of any claim for which it may be liable under this paragraph. If the contractor is insured pursuant to A.R.S. § 41-621 and § 35-154, this section shall not apply.

6.4. Force Majeure.

6.4.1 Except for payment of sums due, neither party shall be liable to the other nor deemed in default under this Contract if and to the extent that such party's performance of this Contract is prevented by reason of force majeure. The term *"force majeure"* means an occurrence that is beyond the control of the party affected and occurs without its fault or negligence. Without limiting the foregoing, force majeure includes acts of God; acts of the public enemy; war; riots; strikes; mobilization; labor disputes; civil disorders; fire; flood; lockouts; injunctions-intervention-acts; or failures or refusals to act by government authority; and other similar occurrences beyond the control of the party declaring force majeure which such party is unable to prevent by exercising reasonable diligence.

6.4.2. Force Majeure shall not include the following occurrences:

6.4.2.1. Late delivery of equipment or materials caused by congestion at a manufacturer's plant or elsewhere, or an oversold condition of the market;

6.4.2.2. Late performance by a subcontractor unless the delay arises out of a force majeure occurrence in accordance with this force majeure term and condition; or

6.4.2.3. Inability of either the Contractor or any subcontractor to acquire or maintain any required insurance, bonds, licenses or permits.

6.4.3. If either party is delayed at any time in the progress of the work by force majeure, the delayed party shall notify the other party in writing of such delay, as soon as is practicable and no later than the following working day, of the commencement thereof and shall specify the causes of such delay in such notice. Such notice shall be delivered or mailed certified-return receipt and shall make a specific reference to this article, thereby invoking its provisions. The delayed party shall cause such delay to cease as soon as practicable and shall notify the other party in writing when it has done so. The time of completion shall be extended by Contract Amendment for a period of time equal to the time that results or effects of such delay prevent the delayed party from performing in accordance with this Contract.

6.4.4. Any delay or failure in performance by either party hereto shall not constitute default hereunder or give rise to any claim for damages or loss of anticipated profits if, and to the extent that such delay or failure is caused by force majeure.

6.5. Third Party Antitrust Violations. The Contractor assigns to the State any claim for overcharges resulting from antitrust violations to the extent that those violations concern materials or services supplied by third parties to the Contractor, toward fulfillment of this Contract.

7. Warranties

7.1. Liens. The Contractor warrants that the materials supplied under this Contract are free of liens and shall remain free of liens.

7.2. Quality. Unless otherwise modified elsewhere in these terms and conditions, the Contractor warrants that, for one year after acceptance by the State of the materials, they shall be:

7.2.1. Of a quality to pass without objection in the trade under the Contract description;

7.2.2. Fit for the intended purposes for which the materials are used;

7.2.3. Within the variations permitted by the Contract and are of even kind, quantity, and quality within each unit and among all units;

7.2.4. Adequately contained, packaged and marked as the Contract may require; and

7.2.5. Conform to the written promises or affirmations of fact made by the Contractor.

7.3. Fitness. The Contractor warrants that any material supplied to the State shall fully conform to all requirements of the Contract and all representations of the Contractor, and shall be fit for all purposes and uses required by the Contract.

7.4. Inspection/Testing. The warranties set forth in subparagraphs 7.1 through 7.3 of this

paragraph are not affected by inspection or testing of or payment for the materials by the State.

7.5. Compliance With Applicable Laws. The materials and services supplied under this Contract shall comply with all applicable Federal, state and local laws, and the Contractor shall maintain all applicable license and permit requirements.

7.6. Survival of Rights and Obligations after Contract Expiration or Termination.

7.6.1. Contractor's Representations and Warranties. All representations and warranties made by the Contractor under this Contract shall survive the expiration or termination hereof. In addition, the parties hereto acknowledge that pursuant to A.R.S. § 12-510, except as provided in A.R.S. § 12-529, the State is not subject to or barred by any limitations of actions prescribed in A.R.S., Title 12, Chapter 5.

7.6.2. Purchase Orders. The Contractor shall, in accordance with all terms and conditions of the Contract, fully perform and shall be obligated to comply with all purchase orders received by the Contractor prior to the expiration or termination hereof, unless otherwise directed in writing by the Procurement Officer, including, without limitation, all purchase orders received prior to but not fully performed and satisfied at the expiration or termination of this Contract.

8. State's Contractual Remedies

8.1. Right to Assurance. If the State in good faith has reason to believe that the Contractor does not intend to, or is unable to perform or continue performing under this Contract, the Procurement Officer may demand in writing that the Contractor give a written assurance of intent to perform. Failure by the Contractor to provide written assurance within the number of Days specified in the demand may, at the State's option, be the basis for terminating the Contract under the Uniform Terms and Conditions or other rights and remedies available by law or provided by the contract.

8.2. Stop Work Order.

8.2.1. The State may, at any time, by written order to the Contractor, require the Contractor to stop all or any part, of the work called for by this Contract for period(s) of days indicated by the State after the order is delivered to the Contractor. The order shall be specifically identified as a stop work order issued under this clause. Upon receipt of the order, the Contractor shall immediately comply with its terms and take all reasonable steps to minimize the incurrence of costs allocable to the work covered by the order during the period of work stoppage.

8.2.2. If a stop work order issued under this clause is canceled or the period of the order or any extension expires, the Contractor shall resume work. The Procurement Officer shall make an equitable adjustment in the delivery schedule or Contract price, or both, and the Contract shall be amended in writing accordingly.

8.3. Non-exclusive Remedies. The rights and the remedies of the State under this Contract are not exclusive.

8.4. Nonconforming Tender. Materials or services supplied under this Contract shall fully comply with the Contract. The delivery of materials or services or a portion of the materials or services that do not fully comply constitutes a breach of contract. On delivery of nonconforming materials or services, the State may terminate the Contract for default under applicable termination clauses in the Contract, exercise any of its rights and remedies under the Uniform Commercial Code, or pursue any other right or remedy available to it.

8.5. Right of Offset. The State shall be entitled to offset against any sums due the Contractor, any expenses or costs incurred by the State, or damages assessed by the State

concerning the Contractor's non-conforming performance or failure to perform the Contract, including expenses, costs and damages described in the Uniform Terms and Conditions.

9. Contract Termination

9.1. Cancellation for Conflict of Interest. Pursuant to A.R.S. § 38-511, the State may cancel this Contract within three (3) years after Contract execution without penalty or further obligation if any person significantly involved in initiating, negotiating, securing, drafting or creating the Contract on behalf of the State is or becomes at any time while the Contract or an extension of the Contract is in effect an employee of or a consultant to any other party to this Contract with respect to the subject matter of the Contract. The cancellation shall be effective when the Contractor receives written notice of the cancellation unless the notice specifies a later time. If the Contractor is a political subdivision of the State, it may also cancel this Contract as provided in A.R.S. § 38-511.

9.2. Gratuities. The State may, by written notice, terminate this Contract, in whole or in part, if the State determines that employment or a Gratuity was offered or made by the Contractor or a representative of the Contractor to any officer or employee of the State for the purpose of influencing the outcome of the procurement or securing the Contract, an amendment to the Contract, or favorable treatment concerning the Contract, including the making of any determination or decision about contract performance. The State, in addition to any other rights or remedies, shall be entitled to recover exemplary damages in the amount of three times the value of the Gratuity offered by the Contractor.

9.3. Suspension or Debarment. The State may, by written notice to the Contractor, immediately terminate this Contract if the State determines that the Contractor has been debarred, suspended or otherwise lawfully prohibited from participating in any public procurement activity, including but not limited to, being disapproved as a subcontractor of any public procurement unit or other governmental body. Submittal of an offer or execution of a contract shall attest that the contractor is not currently suspended or debarred. If the contractor becomes suspended or debarred, the contractor shall immediately notify the State.

9.4. Termination for Convenience. The State reserves the right to terminate the Contract, in whole or in part at any time when in the best interest of the State, without penalty or recourse. Upon receipt of the written notice, the Contractor shall stop all work, as directed in the notice, notify all subcontractors of the effective date of the termination and minimize all further costs to the State. In the event of termination under this paragraph, all documents, data and reports prepared by the Contractor under the Contract shall become the property of and be delivered to the State upon demand. The Contractor shall be entitled to receive just and equitable compensation for work in progress, work completed and materials accepted before the effective date of the termination. The cost principles and procedures provided in A.A.C. R2-7-701 shall apply.

9.5. Termination for Default.

9.5.1. In addition to the rights reserved in the contract, the State may terminate the Contract in whole or in part due to the failure of the Contractor to comply with any term or condition of the Contract, to acquire and maintain all required insurance policies, bonds, licenses and permits, or to make satisfactory progress in performing the Contract. The Procurement Officer shall provide written notice of the termination and the reasons for it to the Contractor.

9.5.2. Upon termination under this paragraph, all goods, materials, documents, data and reports prepared by the Contractor under the Contract shall become the property of and be delivered to the State on demand.

9.5.3. The State may, upon termination of this Contract, procure, on terms and in the manner that it deems appropriate, materials or services to replace those under

this Contract. The Contractor shall be liable to the State for any excess costs incurred by the State in procuring materials or services in substitution for those due from the Contractor.

9.6. Continuation of Performance Through Termination. The Contractor shall continue to perform, in accordance with the requirements of the Contract, up to the date of termination, as directed in the termination notice.

10. **Contract Claims**

All contract claims or controversies under this Contract shall be resolved according to A.R.S. Title 41, Chapter 23, Article 9, and rules adopted thereunder.

11. **Arbitration**

The parties to this Contract agree to resolve all disputes arising out of or relating to this contract through arbitration, after exhausting applicable administrative review, to the extent required by A.R.S. § 12-1518, except as may be required by other applicable statutes (Title 41).

12. **Comments Welcome**

The State Procurement Office periodically reviews the Uniform Terms and Conditions and welcomes any comments you may have. Please submit your comments to: State Procurement Administrator, State Procurement Office, 100 North 15th Avenue, Suite 201, Phoenix, Arizona, 85007.

STATE OF ARIZONA
OFFICE OF THE GOVERNOR

DOUGLAS A. DUCEY
GOVERNOR

DEBBIE MOAK
DIRECTOR

July 28, 2017

Jacqui Clay
Superintendent
Cochise County School Superintendent's Office
100 Clawson Avenue, P.O. Drawer 208
Bisbee, Arizona 85603

Re: Intergovernmental Agreement
Substance Abuse Block Grant

Dear Ms. Clay:

Three Agreements to provide pass-through funding for the Healthy Families Healthy Youth Programming are enclosed for signature.

- **WHEN THE DOCUMENTS ARE SIGNED, KEEP ONE DOCUMENT AND RETURN TWO OF THE ORIGINAL SIGNED DOCUMENTS BY AUGUST 10, 2017, OR AS SOON AS POSSIBLE TO:**

  State of Arizona
  Governor's Accounting Office
  Attn.: Sarah Bean, Procurement Manager
  1700 West Washington Street, Suite 500
  Phoenix, AZ 850007

The Governor's Office of Youth, Faith and Family looks forward to a mutually beneficial relationship during this Agreement period. Should you have any questions, please contact me at sbean@az.gov. **Unreturned documents may affect the start date of this transaction.**

Sincerely,

Sarah Bean

Sarah Bean
Procurement Manager

cc: Nikki Lazarus Green, Program Manager

Regular Board of Supervisors Meeting			**Action 12. Facilities**
Meeting Date:	08/22/2017		
FAA for BDI Reconstruct Taxiway A			
Submitted By:	Michelle Ziatz, Facilities		
Department:	Facilities		
Presentation:	No A/V Presentation	**Recommendation:**	Approve
Document Signatures:	BOS Signature Required	**# of ORIGINALS Submitted for Signature:**	2
NAME of PRESENTER:	Jay Howe	**TITLE of PRESENTER:**	Facilities Director
Mandated Function?:	Not Mandated	**Source of Mandate or Basis for Support?:**	

You will use this Agenda Item template if your item involves a Grant (whether a new or renewal grant). You also must attach the Grant Approval Form to the item before Finance will approve it. Select the SPECIAL LINKS on your left-hand menu and Click on "Grant Approval Form". Then complete the form, save it and attach it to your item (on the Attachments tab).

Information

Agenda Item Text:

Approve Airport Improvement Plan Grant Offer #3-04-0013-011-2017 from the Federal Aviation Administration (FAA) in the amount of $741,497 with a local match share of $37,075 for the Reconstruction of Taxiway A at the Bisbee Douglas International (BDI) Airport.

Background:

This project has been listed in the five-year Airport Capital Improvement Plan (ACIP) since 2012. The County submitted a project application to the Federal Aviation Administration (FAA) in December 2016 for the first phase of this work, which is to reconstruct taxiway A. Under FAA grant guidelines, the County is responsible for a 5% match.

Design of construction was completed under a previous FAA grant.

The Procurement Department has secured an acceptable bid for the design work from Armstrong Consultants, Inc., who is the consultant under contract to perform airport work. FAA and ADOT have approved this contract award for the reconstruction of Taxiway A.

The Arizona Dept of Transportation Aeronautics Division (ADOT) will also issue a grant to match the County share in the amount of $37,000.00. A separate grant agreement will be issued by them when the FAA grant is accepted. This project does not allow administration or overhead costs, as most of that is covered under the consultant's contract.

Department's Next Steps (if approved):

2 original copies have been submitted to the Board for signature. Return one executed copy to Facilities. Facilities will forward executed copy to FAA and a copy to ADOT.

ADOT will issue a separate grant agreement for the share of the match and that item will be placed on a future agenda.

Complete the construction work, oversee the project, maintain the grant file.

Impact of NOT Approving/Alternatives:

If this Grant Agreement is not approved, the County will lose Federal and State approved funding on the airport project in the amount of $741,497. The rehabilitation of the taxiway will not occur which will cause future pavement damage and increased repair costs.

To BOS Staff: Document Disposition/Follow-Up:

Maintain one executed copy and return one executed copy to Facilities.

Budget Information

Information about available funds

Budgeted: ◉	**Funds Available:** ◉	**Amount Available:**
Unbudgeted: ○	**Funds NOT Available:** ○	**Amendment:** ☐

Account Code(s) for Available Funds 1:

Fund Transfers

Fiscal Year: 2017

One-time Fixed Costs? ($$$):

Ongoing Costs? ($$$):

County Match Required? ($$$): 37,075.00

A-87 Overhead Amt? (Co. Cost Allocation $$$):

Source of Funding?: Sales Tax

Fiscal Impact & Funding Sources (if known):

Attachments

FAA Grant Agreement
Grant Approval Form

U.S. Department
of Transportation
Federal Aviation
Administration

GRANT AGREEMENT

PART I –OFFER

Date of Offer: AUG 07 2017

Airport/Planning Area: Bisbee Douglas International

AIP Grant Number: 3-04-0013-011-2017

DUNS Number: 020126041

TO: County of Cochise
(herein called the "Sponsor")

FROM: **The United States of America**(acting through the Federal Aviation Administration, herein called the "FAA")

WHEREAS, the Sponsor has submitted to the FAA a Project Application dated December 16, 2016, for a grant of Federal funds for a project at or associated with the Bisbee Douglas International Airport, which is included as part of this Grant Agreement; and

WHEREAS, the FAA has approved a project for the Bisbee Douglas International Airport (herein called the "Project") consisting of the following:

Reconstruct Taxiway A

which is more fully described in the Project Application.

NOW THEREFORE, According to the applicable provisions of the former Federal Aviation Act of 1958, as amended and recodified, 49 U.S.C. § 40101, et seq., and the former Airport and Airway Improvement Act of 1982 (AAIA), as amended and recodified, 49 U.S.C. § 47101, et seq., (herein the AAIA grant statute is referred to as "the Act"), the representations contained in the Project Application, and in consideration of (a) the Sponsor's adoption and ratification of the Grant Assurances dated March 2014,and the Sponsor's acceptance of this Offer; and, (b) the benefits to accrue to the United States and the public from the accomplishment of the Project and compliance with the Grant Assurances and conditions as herein provided.

THE FEDERAL AVIATION ADMINISTRATION, FOR AND ON BEHALF OF THE UNITED STATES, HEREBY OFFERS AND AGREES to pay 91.06 percent of the allowable costs incurred accomplishing the Project as the United States share of the Project.

This Offer is made on and **SUBJECT TO THE FOLLOWING TERMS AND CONDITIONS**:

CONDITIONS

1. **Maximum Obligation.** The maximum obligation of the United States payable under this Offer is $741,497.

   The following amounts represent a breakdown of the maximum obligation for the purpose of establishing allowable amounts for any future grant amendment, which may increase the foregoing maximum

obligation of the United States under the provisions of 49 U.S.C. § 47108(b):
$0 for planning
$741,497 airport development or noise program implementation; and,
$0 for land acquisition.

2. **Period of Performance.** The period of performance begins on the date the Sponsor formally accepts this agreement. Unless explicitly stated otherwise in an amendment from the FAA, the end date of the period of performance is 4 years (1,460 calendar days) from the date of formal grant acceptance by the Sponsor.

   The Sponsor may only charge allowable costs for obligations incurred prior to the end date of the period of performance (2 CFR §200.309). Unless the FAA authorizes a written extension, the sponsor must submit all project closeout documentation and liquidate (pay off) all obligations incurred under this award no later than 90 calendar days after the end date of the period of performance (2 CFR §200.343).

   The period of performance end date does not relieve or reduce Sponsor obligations and assurances that extend beyond the closeout of a grant agreement.

3. **Ineligible or Unallowable Costs.** The Sponsor must not include any costs in the project that the FAA has determined to be ineligible or unallowable.

4. **Indirect Costs - Sponsor.** Sponsor may charge indirect costs under this award by applying the indirect cost rate identified in the project application as accepted by the FAA, to allowable costs for Sponsor direct salaries and wages.

5. **Determining the Final Federal Share of Costs.** The United States' share of allowable project costs will be made in accordance with the regulations, policies, and procedures of the Secretary. Final determination of the United States' share will be based upon the final audit of the total amount of allowable project costs and settlement will be made for any upward or downward adjustments to the Federal share of costs.

6. **Completing the Project Without Delay and in Conformance with Requirements.** The Sponsor must carry out and complete the project without undue delays and in accordance with this agreement, and the regulations, policies, and procedures of the Secretary. The Sponsor also agrees to comply with the assurances which are part of this agreement.

7. **Amendments or Withdrawals before Grant Acceptance.** The FAA reserves the right to amend or withdraw this offer at any time prior to its acceptance by the Sponsor.

8. **Offer Expiration Date.** This offer will expire and the United States will not be obligated to pay any part of the costs of the project unless this offer has been accepted by the Sponsor on or before August 31, 2017, or such subsequent date as may be prescribed in writing by the FAA.

9. **Improper Use of Federal Funds.** The Sponsor must take all steps, including litigation if necessary, to recover Federal funds spent fraudulently, wastefully, or in violation of Federal antitrust statutes, or misused in any other manner for any project upon which Federal funds have been expended. For the purposes of this grant agreement, the term "Federal funds" means funds however used or dispersed by the Sponsor, that were originally paid pursuant to this or any other Federal grant agreement. The Sponsor must obtain the approval of the Secretary as to any determination of the amount of the Federal share of such funds. The Sponsor must return the recovered Federal share, including funds recovered by settlement, order, or judgment, to the Secretary. The Sponsor must furnish to the Secretary, upon request, all documents and records pertaining to the determination of the amount of the Federal share or to any settlement, litigation, negotiation, or other efforts taken to recover such funds. All settlements or other final positions of the Sponsor, in court or otherwise, involving the recovery of such Federal share require advance approval by the Secretary.

10. **United States Not Liable for Damage or Injury.** The United States is not responsible or liable for damage to property or injury to persons which may arise from, or be incident to, compliance with this grant agreement.

11. **System for Award Management (SAM) Registration And Universal Identifier.**

    A. Requirement for System for Award Management (SAM): Unless the Sponsor is exempted from this requirement under 2 CFR 25.110, the Sponsor must maintain the currency of its information in the SAM until the Sponsor submits the final financial report required under this grant, or receives the final payment, whichever is later. This requires that the Sponsor review and update the information at least annually after the initial registration and more frequently if required by changes in information or another award term. Additional information about registration procedures may be found at the SAM website (currently at http://www.sam.gov).

    B. Data Universal Numbering System: DUNS number means the nine-digit number established and assigned by Dun and Bradstreet, Inc. (D & B) to uniquely identify business entities. A DUNS number may be obtained from D & B by telephone (currently 866–705–5771) or on the web (currently at http://fedgov.dnb.com/webform).

12. **Electronic Grant Payment(s).** Unless otherwise directed by the FAA, the Sponsor must make each payment request under this agreement electronically via the Delphi eInvoicing System for Department of Transportation (DOT) Financial Assistance Awardees.

13. **Informal Letter Amendment of AIP Projects.** If, during the life of the project, the FAA determines that the maximum grant obligation of the United States exceeds the expected needs of the Sponsor by $25,000 or five percent (5%), whichever is greater, the FAA can issue a letter amendment to the Sponsor unilaterally reducing the maximum obligation.

    The FAA can also issue a letter to the Sponsor increasing the maximum obligation if there is an overrun in the total actual eligible and allowable project costs to cover the amount of the overrun provided it will not exceed the statutory limitations for grant amendments. The FAA's authority to increase the maximum obligation does not apply to the "planning" component of condition No. 1.

    The FAA can also issue an informal letter amendment that modifies the grant description to correct administrative errors or to delete work items if the FAA finds it advantageous and in the best interests of the United States.

    An informal letter amendment has the same force and effect as a formal grant amendment.

14. **Air and Water Quality.** The Sponsor is required to comply with all applicable air and water quality standards for all projects in this grant. If the Sponsor fails to comply with this requirement, the FAA may suspend, cancel, or terminate this agreement.

15. **Financial Reporting and Payment Requirements.** The Sponsor will comply with all federal financial reporting requirements and payment requirements, including submittal of timely and accurate reports.

16. **Buy American.** Unless otherwise approved in advance by the FAA, the Sponsor will not acquire or permit any contractor or subcontractor to acquire any steel or manufactured products produced outside the United States to be used for any project for which funds are provided under this grant. The Sponsor will include a provision implementing Buy American in every contract.

17. **Maximum Obligation Increase For Nonprimary Airports.** In accordance with 49 U.S.C. § 47108(b), as amended, the maximum obligation of the United States, as stated in Condition No. 1 of this Grant Offer:

    A. May not be increased for a planning project;

    B. May be increased by not more than 15 percent for development projects;

C. May be increased by not more than 15 percent or by an amount not to exceed 25 percent of the total increase in allowable costs attributable to the acquisition of land or interests in land, whichever is greater, based on current credible appraisals or a court award in a condemnation proceeding.

18. Audits for Public Sponsors. The Sponsor must provide for a Single Audit or program specific audit in accordance with 2 CFR part 200. The Sponsor must submit the audit reporting package to the Federal Audit Clearinghouse on the Federal Audit Clearinghouse's Internet Data Entry System at http://harvester.census.gov/facweb/. Provide one copy of the completed audit to the FAA if requested.

19. Suspension or Debarment. When entering into a "covered transaction" as defined by 2 CFR §180.200, the Sponsor must:

A. Verify the non-federal entity is eligible to participate in this Federal program by:

1. Checking the excluded parties list system (EPLS) as maintained within the System for Award Management (SAM) to determine if the non-federal entity is excluded or disqualified; or
2. Collecting a certification statement from the non-federal entity attesting they are not excluded or disqualified from participating; or
3. Adding a clause or condition to covered transactions attesting individual or firm are not excluded or disqualified from participating.

B. Require prime contractors to comply with 2 CFR §180.330 when entering into lower-tier transactions (e.g. Sub-contracts).

C. Immediately disclose to the FAA whenever the Sponsor (1) learns they have entered into a covered transaction with an ineligible entity or (2) suspends or debars a contractor, person, or entity.

20. Ban on Texting While Driving.

A. In accordance with Executive Order 13513, Federal Leadership on Reducing Text Messaging While Driving, October 1, 2009, and DOT Order 3902.10, Text Messaging While Driving, December 30, 2009, the Sponsor is encouraged to:

1. Adopt and enforce workplace safety policies to decrease crashes caused by distracted drivers including policies to ban text messaging while driving when performing any work for, or on behalf of, the Federal government, including work relating to a grant or subgrant.
2. Conduct workplace safety initiatives in a manner commensurate with the size of the business, such as:
   a. Establishment of new rules and programs or re-evaluation of existing programs to prohibit text messaging while driving; and
   b. Education, awareness, and other outreach to employees about the safety risks associated with texting while driving.

B. The Sponsor must insert the substance of this clause on banning texting while driving in all subgrants, contracts and subcontracts.

21. AIP Funded Work Included in a PFC Application.

Within 90 days of acceptance of this award, Sponsor must submit to the Federal Aviation Administration an amendment to any approved Passenger Facility Charge (PFC) application that contains an approved PFC project also covered under this grant award. The airport sponsor may not make any expenditure under this award until project work addressed under this award is removed from an approved PFC application by amendment.

22. Exhibit "A" Property Map. The Exhibit "A" Property Map dated 10/2014, is incorporated herein by reference or is submitted with the project application and made part of this grant agreement.

23. Employee Protection from Reprisal.

A. Prohibition of Reprisals –

1. In accordance with 41 U.S.C. § 4712, an employee of a grantee or subgrantee may not be discharged, demoted, or otherwise discriminated against as a reprisal for disclosing to a person or body described in sub-paragraph (A)(2), information that the employee reasonably believes is evidence of:

   i. Gross mismanagement of a Federal grant;
   ii. Gross waste of Federal funds;
   iii. An abuse of authority relating to implementation or use of Federal funds;
   iv. A substantial and specific danger to public health or safety; or
   v. A violation of law, rule, or regulation related to a Federal grant.

2. Persons and bodies covered: The persons and bodies to which a disclosure by an employee is covered are as follows:

   i. A member of Congress or a representative of a committee of Congress;
   ii. An Inspector General;
   iii. The Government Accountability Office;
   iv. A Federal office or employee responsible for oversight of a grant program;
   v. A court or grand jury;
   vi. A management office of the grantee or subgrantee; or
   vii. A Federal or State regulatory enforcement agency.

3. Submission of Complaint – A person who believes that they have been subjected to a reprisal prohibited by paragraph A of this grant term may submit a complaint regarding the reprisal to the Office of Inspector General (OIG) for the U.S. Department of Transportation.

4. Time Limitation for Submittal of a Complaint - A complaint may not be brought under this subsection more than three years after the date on which the alleged reprisal took place.

5. Required Actions of the Inspector General – Actions, limitations and exceptions of the Inspector General's office are established under 41 U.S.C. § 4712(b)

6. Assumption of Rights to Civil Remedy - Upon receipt of an explanation of a decision not to conduct or continue an investigation by the Office of Inspector General, the person submitting a complaint assumes the right to a civil remedy under41 U.S.C. § 4712(c).

24. Pavement Maintenance Management Program. The Sponsor agrees that it will implement an effective airport pavement maintenance management program as required by Grant Assurance Pavement Preventive Management. The Sponsor agrees that it will use the program for the useful life of any pavement constructed, reconstructed, or repaired with federal financial assistance at the airport. The Sponsor further agrees that the program will:

A. Follow FAA Advisory Circular 150/5380-6, "Guidelines and Procedures for Maintenance of Airport Pavements," for specific guidelines and procedures for maintaining airport pavements, establishing an effective maintenance program, specific types of distress and its probable cause, inspection guidelines, and recommended methods of repair;
B. Detail the procedures to be followed to assure that proper pavement maintenance, both preventive and repair, is performed;
C. Include a Pavement Inventory, Inspection Schedule, Record Keeping, Information Retrieval, and Reference, meeting the following requirements:

1. Pavement Inventory. The following must be depicted in an appropriate form and level of detail:
    a. Location of all runways, taxiways, and aprons;
    b. Dimensions;
    c. Type of pavement; and,
    d. Year of construction or most recent major rehabilitation.
2. Inspection Schedule.
    a. Detailed Inspection. A detailed inspection must be performed at least once a year. If a history of recorded pavement deterioration is available, i.e., Pavement Condition Index (PCI) survey as set forth in the Advisory Circular 150/5380-6, the frequency of inspections may be extended to three years.
    b. Drive-By Inspection. A drive-by inspection must be performed a minimum of once per month to detect unexpected changes in the pavement condition. For drive-by inspections, the date of inspection and any maintenance performed must be recorded.
3. Record Keeping. Complete information on the findings of all detailed inspections and on the maintenance performed must be recorded and kept on file for a minimum of five years. The type of distress, location, and remedial action, scheduled or performed, must be documented. The minimum information is:
    a. Inspection date;
    b. Location;
    c. Distress types; and
    d. Maintenance scheduled or performed.
4. Information Retrieval System. The Sponsor must be able to retrieve the information and records produced by the pavement survey to provide a report to the FAA as may be required.

25. <u>Project which Contain Paving Work in Excess of $500,000</u>. The Sponsor agrees to:

A. Furnish a construction management program to the FAA prior to the start of construction which details the measures and procedures to be used to comply with the quality control provisions of the construction contract, including, but not limited to, all quality control provisions and tests required by the Federal specifications. The program must include as a minimum:
    1. The name of the person representing the Sponsor who has overall responsibility for contract administration for the project and the authority to take necessary actions to comply with the contract;
    2. Names of testing laboratories and consulting engineer firms with quality control responsibilities on the project, together with a description of the services to be provided;
    3. Procedures for determining that the testing laboratories meet the requirements of the American Society of Testing and Materials standards on laboratory evaluation referenced in the contract specifications (D 3666, C 1077);
    4. Qualifications of engineering supervision and construction inspection personnel;
    5. A listing of all tests required by the contract specifications, including the type and frequency of tests to be taken, the method of sampling, the applicable test standard, and the acceptance criteria or tolerances permitted for each type of test; and

6. Procedures for ensuring that the tests are taken in accordance with the program, that they are documented daily, and that the proper corrective actions, where necessary, are undertaken.

B. Submit at completion of the project, a final test and quality assurance report documenting the summary results of all tests performed; highlighting those tests that indicated failure or that did not meet the applicable test standard. The report must include the pay reductions applied and the reasons for accepting any out-of-tolerance material. Submit interim test and quality assurance reports when requested by the FAA.

C. Failure to provide a complete report as described in paragraph b, or failure to perform such tests, will, absent any compelling justification; result in a reduction in Federal participation for costs incurred in connection with construction of the applicable pavement. Such reduction will be at the discretion of the FAA and will be based on the type or types of required tests not performed or not documented and will be commensurate with the proportion of applicable pavement with respect to the total pavement constructed under the grant agreement.

D. The FAA, at its discretion, reserves the right to conduct independent tests and to reduce grant payments accordingly if such independent tests determine that sponsor test results are inaccurate.

The Sponsor's acceptance of this Offer and ratification and adoption of the Project Application incorporated herein shall be evidenced by execution of this instrument by the Sponsor, as hereinafter provided, and this Offer and Acceptance shall comprise a Grant Agreement, as provided by the Act, constituting the contractual obligations and rights of the United States and the Sponsor with respect to the accomplishment of the Project and compliance with the assurances and conditions as provided herein. Such Grant Agreement shall become effective upon the Sponsor's acceptance of this Offer.

UNITED STATES OF AMERICA
FEDERAL AVIATION ADMINISTRATION



(Signature)

Mike N. Williams
(Typed Name)

Manager, Phoenix Airports District Office
(Title of FAA Official)

PART II - ACCEPTANCE

The Sponsor does hereby ratify and adopt all assurances, statements, representations, warranties, covenants, and agreements contained in the Project Application and incorporated materials referred to in the foregoing Offer, and does hereby accept this Offer and by such acceptance agrees to comply with all of the terms and conditions in this Offer and in the Project Application.

I declare under penalty of perjury that the foregoing is true and correct.[1]

Executed this_____day of _____,_____.

County of Cochise
(Name of Sponsor)

(Signature of Sponsor's Authorized Official)

By: *(Typed Name of Sponsor's Authorized Official)*

Title: *(Title of Sponsor's Authorized Official*

CERTIFICATE OF SPONSOR'S ATTORNEY

I, _____, acting as Attorney for the Sponsor do hereby certify:

That in my opinion the Sponsor is empowered to enter into the foregoing Grant Agreement under the laws of the State of_____. Further, I have examined the foregoing Grant Agreement and the actions taken by said Sponsor and Sponsor's official representative has been duly authorized and that the execution thereof is in all respects due and proper and in accordance with the laws of the said State and the Act. In addition, for grants involving projects to be carried out on property not owned by the Sponsor, there are no legal impediments that will prevent full performance by the Sponsor. Further, it is my opinion that the said Grant Agreement constitutes a legal and binding obligation of the Sponsor in accordance with the terms thereof.

Dated at _____(location) this _____day of _____,_____

By: _____
(Signature of Sponsor's Attorney)

[1]Knowingly and willfully providing false information to the Federal government is a violation of 18 U.S.C. Section 1001 (False Statements) and could subject you to fines, imprisonment, or both.

ASSURANCES

AIRPORT SPONSORS

A. General.

a. These assurances shall be complied with in the performance of grant agreements for airport development, airport planning, and noise compatibility program grants for airport sponsors.

b. These assurances are required to be submitted as part of the project application by sponsors requesting funds under the provisions of Title 49, U.S.C., subtitle VII, as amended. As used herein, the term "public agency sponsor" means a public agency with control of a public-use airport; the term "private sponsor" means a private owner of a public-use airport; and the term "sponsor" includes both public agency sponsors and private sponsors.

c. Upon acceptance of this grant offer by the sponsor, these assurances are incorporated in and become part of this grant agreement.

B. Duration and Applicability.

1. **Airport development or Noise Compatibility Program Projects Undertaken by a Public Agency Sponsor.**

The terms, conditions and assurances of this grant agreement shall remain in full force and effect throughout the useful life of the facilities developed or equipment acquired for an airport development or noise compatibility program project, or throughout the useful life of the project items installed within a facility under a noise compatibility program project, but in any event not to exceed twenty (20) years from the date of acceptance of a grant offer of Federal funds for the project. However, there shall be no limit on the duration of the assurances regarding Exclusive Rights and Airport Revenue so long as the airport is used as an airport. There shall be no limit on the duration of the terms, conditions, and assurances with respect to real property acquired with federal funds. Furthermore, the duration of the Civil Rights assurance shall be specified in the assurances.

2. **Airport Development or Noise Compatibility Projects Undertaken by a Private Sponsor.**

The preceding paragraph 1 also applies to a private sponsor except that the useful life of project items installed within a facility or the useful life of the facilities developed or equipment acquired under an airport development or noise compatibility program project shall be no less than ten (10) years from the date of acceptance of Federal aid for the project.

3. **Airport Planning Undertaken by a Sponsor.**

Unless otherwise specified in this grant agreement, only Assurances 1, 2, 3, 5, 6, 13, 18, 25, 30, 32, 33, and 34 in Section C apply to planning projects. The terms, conditions, and assurances of this grant agreement shall remain in full force and effect during the life of the project; there shall be no limit on the duration of the assurances regarding Exclusive Rights and Airport Revenue so long as the airport is used as an airport.

C. Sponsor Certification.

The sponsor hereby assures and certifies, with respect to this grant that:

1. **General Federal Requirements.**

It will comply with all applicable Federal laws, regulations, executive orders, policies, guidelines, and requirements as they relate to the application, acceptance and use of Federal funds for this project including but not limited to the following:

FEDERAL LEGISLATION

a. Title 49, U.S.C., subtitle VII, as amended.

b. Davis-Bacon Act - 40 U.S.C. 276(a), et seq.[1]

c. Federal Fair Labor Standards Act - 29 U.S.C. 201, et seq.

d. Hatch Act – 5 U.S.C. 1501, et seq.[2]

e. Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 Title 42 U.S.C. 4601, et seq.[1 2]

f. National Historic Preservation Act of 1966 - Section 106 - 16 U.S.C. 470(f).[1]

g. Archeological and Historic Preservation Act of 1974 - 16 U.S.C. 469 through 469c.[1]

h. Native Americans Grave Repatriation Act - 25 U.S.C. Section 3001, et seq.

i. Clean Air Act, P.L. 90-148, as amended.

j. Coastal Zone Management Act, P.L. 93-205, as amended.

k. Flood Disaster Protection Act of 1973 - Section 102(a) - 42 U.S.C. 4012a.[1]

l. Title 49, U.S.C., Section 303, (formerly known as Section 4(f))

m. Rehabilitation Act of 1973 - 29 U.S.C. 794.

n. Title VIof the Civil Rights Act of 1964 (42 U.S.C. § 2000d et seq., 78 stat. 252) (prohibits discrimination on the basis of race, color, national origin);

o. Americans with Disabilities Act of 1990, as amended, (42 U.S.C. § 12101 et seq.), prohibits discrimination on the basis of disability).

p. Age Discrimination Act of 1975 - 42 U.S.C. 6101, et seq.

q. American Indian Religious Freedom Act, P.L. 95-341, as amended.

r. Architectural Barriers Act of 1968 -42 U.S.C. 4151, et seq.[1]

s. Power plant and Industrial Fuel Use Act of 1978 - Section 403- 2 U.S.C. 8373.[1]

t. Contract Work Hours and Safety Standards Act - 40 U.S.C. 327, et seq.[1]

u. Copeland Anti-kickback Act - 18 U.S.C. 874.1

v. National Environmental Policy Act of 1969 - 42 U.S.C. 4321, et seq.[1]

w. Wild and Scenic Rivers Act, P.L. 90-542, as amended.

x. Single Audit Act of 1984 - 31 U.S.C. 7501, et seq.[2]

y. Drug-Free Workplace Act of 1988 - 41 U.S.C. 702 through 706.

z. The Federal Funding Accountability and Transparency Act of 2006, as amended (Pub. L. 109-282, as amended by section 6202 of Pub. L. 110-252).

EXECUTIVE ORDERS

a. Executive Order 11246 - Equal Employment Opportunity[1]

b. Executive Order 11990 - Protection of Wetlands

c. Executive Order 11998 –Flood Plain Management

d. Executive Order 12372 - Intergovernmental Review of Federal Programs

e. Executive Order 12699 - Seismic Safety of Federal and Federally Assisted New Building Construction[1]

f. Executive Order 12898 - Environmental Justice

FEDERAL REGULATIONS

a. 2 CFR Part180 - OMBGuidelines to Agencies on Governmentwide Debarment and Suspension (Nonprocurement).

b. 2 CFR Part 200, Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards. [OMB Circular A-87 Cost Principles Applicable to Grants and Contracts with State and Local Governments, and OMB Circular A-133 - Audits of States, Local Governments, and Non-Profit Organizations].[4, 5, 6]

c. 2 CFR Part 1200 – Nonprocurement Suspension and Debarment

d. 14 CFR Part 13 - Investigative and Enforcement Procedures14 CFR Part 16 - Rules of Practice For Federally Assisted Airport Enforcement Proceedings.

e. 14 CFR Part 150 - Airport noise compatibility planning.

f. 28 CFR Part 35- Discrimination on the Basis of Disability in State and Local Government Services.

g. 28 CFR § 50.3 - U.S. Department of Justice Guidelines for Enforcement of Title VI of the Civil Rights Act of 1964.

h. 29 CFR Part 1 - Procedures for predetermination of wage rates.[1]

i. 29 CFR Part 3 - Contractors and subcontractors on public building or public work financed in whole or part by loans or grants from the United States.[1]

j. 29 CFR Part 5 - Labor standards provisions applicable to contracts covering federally financed and assisted construction (also labor standards provisions applicable to non-construction contracts subject to the Contract Work Hours and Safety Standards Act).[1]

k. 41 CFR Part 60 - Office of Federal Contract Compliance Programs, Equal Employment Opportunity, Department of Labor (Federal and federally assisted contracting requirements).[1]

l. 49 CFR Part 18 - Uniform administrative requirements for grants and cooperative agreements to state and local governments.[3]

m. 49 CFR Part 20 - New restrictions on lobbying.

n. 49 CFR Part 21 – Nondiscrimination in federally-assisted programs of the Department of Transportation - effectuation of Title VI of the Civil Rights Act of 1964.

o. 49 CFR Part 23 - Participation by Disadvantage Business Enterprise in Airport Concessions.

p. 49 CFR Part 24 – Uniform Relocation Assistance and Real Property Acquisition for Federal and Federally Assisted Programs.[1 2]

q. 49 CFR Part 26 – Participation by Disadvantaged Business Enterprises in Department of Transportation Programs.

r. 49 CFR Part 27 – Nondiscrimination on the Basis of Handicap in Programs and Activities Receiving or Benefiting from Federal Financial Assistance.[1]

s. 49 CFR Part 28 –Enforcement of Nondiscrimination on the Basis of Handicap in Programs or Activities conducted by the Department of Transportation.

t. 49 CFR Part 30 - Denial of public works contracts to suppliers of goods and services of countries that deny procurement market access to U.S. contractors.

u. 49 CFR Part 32 –Governmentwide Requirements for Drug-Free Workplace (Financial Assistance)

v. 49 CFR Part 37 –Transportation Services for Individuals with Disabilities (ADA).

w. 49 CFR Part 41 - Seismic safety of Federal and federally assisted or regulated new building construction.

SPECIFIC ASSURANCES

Specific assurances required to be included in grant agreements by any of the above laws, regulations or circulars are incorporated by reference in this grant agreement.

FOOTNOTES TO ASSURANCE C.1.

[1] These laws do not apply to airport planning sponsors.

[2] These laws do not apply to private sponsors.

[3] 49 CFR Part 18 and 2 CFR Part 200 contain requirements for State and Local Governments receiving Federal assistance. Any requirement levied upon State and Local Governments by this regulation and circular shall also be applicable to private sponsors receiving Federal assistance under Title 49, United States Code.

[4] On December 26, 2013 at 78 FR 78590, the Office of Management and Budget (OMB) issued the Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards in 2 CFR Part 200. 2 CFR Part 200 replaces and combines the former Uniform Administrative Requirements for Grants (OMB Circular A-102 and Circular A-110 or 2 CFR Part 215 or Circular) as well as the Cost Principles (Circulars A-21 or 2 CFR part 220; Circular A-87 or 2 CFR part 225; and A-122, 2 CFR part 230). Additionally it replaces Circular A-133 guidance on the Single Annual Audit. In accordance with 2 CFR section 200.110, the standards set forth in Part 200 which affect administration of Federal awards issued by Federal agencies become effective once implemented by Federal agencies or when any future amendment to this Part becomes final. Federal agencies, including the Department of Transportation, must implement the policies and procedures applicable to Federal awards by promulgating a regulation to be effective by December 26, 2014 unless different provisions are required by statute or approved by OMB.

[5] Cost principles established in 2 CFR part 200 subpart E must be used as guidelines for determining the eligibility of specific types of expenses.

[6] Audit requirements established in 2 CFR part 200 subpart F are the guidelines for audits.

2. **Responsibility and Authority of the Sponsor.**

a. Public Agency Sponsor:

It has legal authority to apply for this grant, and to finance and carry out the proposed project; that a resolution, motion or similar action has been duly adopted or passed as an official act of the applicant's governing body authorizing the filing of the application, including all understandings and assurances contained therein, and directing and authorizing the person identified as the official representative of the applicant to act in connection with the application and to provide such additional information as may be required.

b. Private Sponsor:

It has legal authority to apply for this grant and to finance and carry out the proposed project and comply with all terms, conditions, and assurances of this grant agreement. It shall designate an official representative and shall in writing direct and authorize that person to file this application, including all understandings and assurances contained therein; to act in connection with this application; and to provide such additional information as may be required.

3. **Sponsor Fund Availability.**

   It has sufficient funds available for that portion of the project costs which are not to be paid by the United States. It has sufficient funds available to assure operation and maintenance of items funded under this grant agreement which it will own or control.

4. **Good Title.**

   a. It, a public agency or the Federal government, holds good title, satisfactory to the Secretary, to the landing area of the airport or site thereof, or will give assurance satisfactory to the Secretary that good title will be acquired.

   b. For noise compatibility program projects to be carried out on the property of the sponsor, it holds good title satisfactory to the Secretary to that portion of the property upon which Federal funds will be expended or will give assurance to the Secretary that good title will be obtained.

5. **Preserving Rights and Powers.**

   a. It will not take or permit any action which would operate to deprive it of any of the rights and powers necessary to perform any or all of the terms, conditions, and assurances in this grant agreement without the written approval of the Secretary, and will act promptly to acquire, extinguish or modify any outstanding rights or claims of right of others which would interfere with such performance by the sponsor. This shall be done in a manner acceptable to the Secretary.

   b. It will not sell, lease, encumber, or otherwise transfer or dispose of any part of its title or other interests in the property shown on Exhibit A to this application or, for a noise compatibility program project, that portion of the property upon which Federal funds have been expended, for the duration of the terms, conditions, and assurances in this grant agreement without approval by the Secretary. If the transferee is found by the Secretary to be eligible under Title 49, United States Code, to assume the obligations of this grant agreement and to have the power, authority, and financial resources to carry out all such obligations, the sponsor shall insert in the contract or document transferring or disposing of the sponsor's interest, and make binding upon the transferee all of the terms, conditions, and assurances contained in this grant agreement.

   c. For all noise compatibility program projects which are to be carried out by another unit of local government or are on property owned by a unit of local government other than the sponsor, it will enter into an agreement with that government. Except as otherwise specified by the Secretary, that agreement shall obligate that government to the same terms, conditions, and assurances that would be applicable to it if it applied directly to the FAA for a grant to undertake the noise compatibility program project. That agreement and changes thereto must be satisfactory to the Secretary. It will take steps to enforce this agreement against the local government if there is substantial non-compliance with the terms of the agreement.

d. For noise compatibility program projects to be carried out on privately owned property, it will enter into an agreement with the owner of that property which includes provisions specified by the Secretary. It will take steps to enforce this agreement against the property owner whenever there is substantial non-compliance with the terms of the agreement.

e. If the sponsor is a private sponsor, it will take steps satisfactory to the Secretary to ensure that the airport will continue to function as a public-use airport in accordance with these assurances for the duration of these assurances.

f. If an arrangement is made for management and operation of the airport by any agency or person other than the sponsor or an employee of the sponsor, the sponsor will reserve sufficient rights and authority to insure that the airport will be operated and maintained in accordance Title 49, United States Code, the regulations and the terms, conditions and assurances in this grant agreement and shall insure that such arrangement also requires compliance therewith.

g. Sponsors of commercial service airports will not permit or enter into any arrangement that results in permission for the owner or tenant of a property used as a residence, or zoned for residential use, to taxi an aircraft between that property and any location on airport. Sponsors of general aviation airports entering into any arrangement that results in permission for the owner of residential real property adjacent to or near the airport must comply with the requirements of Sec. 136 of Public Law 112-95 and the sponsor assurances.

6. **Consistency with Local Plans.**

   The project is reasonably consistent with plans (existing at the time of submission of this application) of public agencies that are authorized by the State in which the project is located to plan for the development of the area surrounding the airport.

7. **Consideration of Local Interest.**

   It has given fair consideration to the interest of communities in or near where the project may be located.

8. **Consultation with Users.**

   In making a decision to undertake any airport development project under Title 49, United States Code, it has undertaken reasonable consultations with affected parties using the airport at which project is proposed.

9. **Public Hearings.**

   In projects involving the location of an airport, an airport runway, or a major runway extension, it has afforded the opportunity for public hearings for the purpose of considering the economic, social, and environmental effects of the airport or runway location and its consistency with goals and objectives of such planning as has been carried out by the community and it shall, when requested by the Secretary, submit a copy of the transcript of such hearings to the Secretary. Further, for such projects, it has on its management board either voting representation from the communities where the project is located or has advised the communities that they have the right to petition the Secretary concerning a proposed project.

10. **Metropolitan Planning Organization.**

    In projects involving the location of an airport, an airport runway, or a major runway extension at a medium or large hub airport, the sponsor has made available to and has provided upon request to the metropolitan planning organization in the area in which the airport is located, if any, a copy

of the proposed amendment to the airport layout plan to depict the project and a copy of any airport master plan in which the project is described or depicted.

11. **Pavement Preventive Maintenance.**

    With respect to a project approved after January 1, 1995, for the replacement or reconstruction of pavement at the airport, it assures or certifies that it has implemented an effective airport pavement maintenance-management program and it assures that it will use such program for the useful life of any pavement constructed, reconstructed or repaired with Federal financial assistance at the airport. It will provide such reports on pavement condition and pavement management programs as the Secretary determines may be useful.

12. **Terminal Development Prerequisites.**

    For projects which include terminal development at a public use airport, as defined in Title 49, it has, on the date of submittal of the project grant application, all the safety equipment required for certification of such airport under section 44706 of Title 49, United States Code, and all the security equipment required by rule or regulation, and has provided for access to the passenger enplaning and deplaning area of such airport to passengers enplaning and deplaning from aircraft other than air carrier aircraft.

13. **Accounting System, Audit, and Record Keeping Requirements.**

    a. It shall keep all project accounts and records which fully disclose the amount and disposition by the recipient of the proceeds of this grant, the total cost of the project in connection with which this grant is given or used, and the amount or nature of that portion of the cost of the project supplied by other sources, and such other financial records pertinent to the project. The accounts and records shall be kept in accordance with an accounting system that will facilitate an effective audit in accordance with the Single Audit Act of 1984.

    b. It shall make available to the Secretary and the Comptroller General of the United States, or any of their duly authorized representatives, for the purpose of audit and examination, any books, documents, papers, and records of the recipient that are pertinent to this grant. The Secretary may require that an appropriate audit be conducted by a recipient. In any case in which an independent audit is made of the accounts of a sponsor relating to the disposition of the proceeds of a grant or relating to the project in connection with which this grant was given or used, it shall file a certified copy of such audit with the Comptroller General of the United States not later than six (6) months following the close of the fiscal year for which the audit was made.

14. **Minimum Wage Rates.**

    It shall include, in all contracts in excess of $2,000 for work on any projects funded under this grant agreement which involve labor, provisions establishing minimum rates of wages, to be predetermined by the Secretary of Labor, in accordance with the Davis-Bacon Act, as amended (40 U.S.C. 276a-276a-5), which contractors shall pay to skilled and unskilled labor, and such minimum rates shall be stated in the invitation for bids and shall be included in proposals or bids for the work.

15. **Veteran's Preference.**

    It shall include in all contracts for work on any project funded under this grant agreement which involve labor, such provisions as are necessary to insure that, in the employment of labor (except in executive, administrative, and supervisory positions), preference shall be given to Vietnam era veterans, Persian Gulf veterans, Afghanistan-Iraq war veterans, disabled veterans, and small business concerns owned and controlled by disabled veterans as defined in Section 47112 of Title

49, United States Code. However, this preference shall apply only where the individuals are available and qualified to perform the work to which the employment relates.

16. **Conformity to Plans and Specifications.**

    It will execute the project subject to plans, specifications, and schedules approved by the Secretary. Such plans, specifications, and schedules shall be submitted to the Secretary prior to commencement of site preparation, construction, or other performance under this grant agreement, and, upon approval of the Secretary, shall be incorporated into this grant agreement. Any modification to the approved plans, specifications, and schedules shall also be subject to approval of the Secretary, and incorporated into this grant agreement.

17. **Construction Inspection and Approval.**

    It will provide and maintain competent technical supervision at the construction site throughout the project to assure that the work conforms to the plans, specifications, and schedules approved by the Secretary for the project. It shall subject the construction work on any project contained in an approved project application to inspection and approval by the Secretary and such work shall be in accordance with regulations and procedures prescribed by the Secretary. Such regulations and procedures shall require such cost and progress reporting by the sponsor or sponsors of such project as the Secretary shall deem necessary.

18. **Planning Projects.**

    In carrying out planning projects:

    a. It will execute the project in accordance with the approved program narrative contained in the project application or with the modifications similarly approved.

    b. It will furnish the Secretary with such periodic reports as required pertaining to the planning project and planning work activities.

    c. It will include in all published material prepared in connection with the planning project a notice that the material was prepared under a grant provided by the United States.

    d. It will make such material available for examination by the public, and agrees that no material prepared with funds under this project shall be subject to copyright in the United States or any other country.

    e. It will give the Secretary unrestricted authority to publish, disclose, distribute, and otherwise use any of the material prepared in connection with this grant.

    f. It will grant the Secretary the right to disapprove the sponsor's employment of specific consultants and their subcontractors to do all or any part of this project as well as the right to disapprove the proposed scope and cost of professional services.

    g. It will grant the Secretary the right to disapprove the use of the sponsor's employees to do all or any part of the project.

    h. It understands and agrees that the Secretary's approval of this project grant or the Secretary's approval of any planning material developed as part of this grant does not constitute or imply any assurance or commitment on the part of the Secretary to approve any pending or future application for a Federal airport grant.

19. **Operation and Maintenance.**

    a. The airport and all facilities which are necessary to serve the aeronautical users of the airport, other than facilities owned or controlled by the United States, shall be operated at all times in a safe and serviceable condition and in accordance with the minimum standards as may be

required or prescribed by applicable Federal, state and local agencies for maintenance and operation. It will not cause or permit any activity or action thereon which would interfere with its use for airport purposes. It will suitably operate and maintain the airport and all facilities thereon or connected therewith, with due regard to climatic and flood conditions. Any proposal to temporarily close the airport for non-aeronautical purposes must first be approved by the Secretary. In furtherance of this assurance, the sponsor will have in effect arrangements for-

1) Operating the airport's aeronautical facilities whenever required;

2) Promptly marking and lighting hazards resulting from airport conditions, including temporary conditions; and

3) Promptly notifying airmen of any condition affecting aeronautical use of the airport. Nothing contained herein shall be construed to require that the airport be operated for aeronautical use during temporary periods when snow, flood or other climatic conditions interfere with such operation and maintenance. Further, nothing herein shall be construed as requiring the maintenance, repair, restoration, or replacement of any structure or facility which is substantially damaged or destroyed due to an act of God or other condition or circumstance beyond the control of the sponsor.

b. It will suitably operate and maintain noise compatibility program items that it owns or controls upon which Federal funds have been expended.

20. **Hazard Removal and Mitigation.**

It will take appropriate action to assure that such terminal airspace as is required to protect instrument and visual operations to the airport (including established minimum flight altitudes) will be adequately cleared and protected by removing, lowering, relocating, marking, or lighting or otherwise mitigating existing airport hazards and by preventing the establishment or creation of future airport hazards.

21. **Compatible Land Use.**

It will take appropriate action, to the extent reasonable, including the adoption of zoning laws, to restrict the use of land adjacent to or in the immediate vicinity of the airport to activities and purposes compatible with normal airport operations, including landing and takeoff of aircraft. In addition, if the project is for noise compatibility program implementation, it will not cause or permit any change in land use, within its jurisdiction, that will reduce its compatibility, with respect to the airport, of the noise compatibility program measures upon which Federal funds have been expended.

22. **Economic Nondiscrimination.**

a. It will make the airport available as an airport for public use on reasonable terms and without unjust discrimination to all types, kinds and classes of aeronautical activities, including commercial aeronautical activities offering services to the public at the airport.

b. In any agreement, contract, lease, or other arrangement under which a right or privilege at the airport is granted to any person, firm, or corporation to conduct or to engage in any aeronautical activity for furnishing services to the public at the airport, the sponsor will insert and enforce provisions requiring the contractor to-

1) furnish said services on a reasonable, and not unjustly discriminatory, basis to all users thereof, and

2) charge reasonable, and not unjustly discriminatory, prices for each unit or service,

provided that the contractor may be allowed to make reasonable and nondiscriminatory discounts, rebates, or other similar types of price reductions to volume purchasers.

a.) Each fixed-based operator at the airport shall be subject to the same rates, fees, rentals, and other charges as are uniformly applicable to all other fixed-based operators making the same or similar uses of such airport and utilizing the same or similar facilities.

b.) Each air carrier using such airport shall have the right to service itself or to use any fixed-based operator that is authorized or permitted by the airport to serve any air carrier at such airport.

c.) Each air carrier using such airport (whether as a tenant, non-tenant, or subtenant of another air carrier tenant) shall be subject to such nondiscriminatory and substantially comparable rules, regulations, conditions, rates, fees, rentals, and other charges with respect to facilities directly and substantially related to providing air transportation as are applicable to all such air carriers which make similar use of such airport and utilize similar facilities, subject to reasonable classifications such as tenants or non-tenants and signatory carriers and non-signatory carriers. Classification or status as tenant or signatory shall not be unreasonably withheld by any airport provided an air carrier assumes obligations substantially similar to those already imposed on air carriers in such classification or status.

d.) It will not exercise or grant any right or privilege which operates to prevent any person, firm, or corporation operating aircraft on the airport from performing any services on its own aircraft with its own employees [including, but not limited to maintenance, repair, and fueling] that it may choose to perform.

e.) In the event the sponsor itself exercises any of the rights and privileges referred to in this assurance, the services involved will be provided on the same conditions as would apply to the furnishing of such services by commercial aeronautical service providers authorized by the sponsor under these provisions.

f.) The sponsor may establish such reasonable, and not unjustly discriminatory, conditions to be met by all users of the airport as may be necessary for the safe and efficient operation of the airport.

g.) The sponsor may prohibit or limit any given type, kind or class of aeronautical use of the airport if such action is necessary for the safe operation of the airport or necessary to serve the civil aviation needs of the public.

23. **Exclusive Rights.**

It will permit no exclusive right for the use of the airport by any person providing, or intending to provide, aeronautical services to the public. For purposes of this paragraph, the providing of the services at an airport by a single fixed-based operator shall not be construed as an exclusive right if both of the following apply:

a. It would be unreasonably costly, burdensome, or impractical for more than one fixed-based operator to provide such services, and

b. If allowing more than one fixed-based operator to provide such services would require the reduction of space leased pursuant to an existing agreement between such single fixed-based operator and such airport. It further agrees that it will not, either directly or indirectly, grant or permit any person, firm, or corporation, the exclusive right at the airport to conduct any aeronautical activities, including, but not limited to charter flights, pilot training, aircraft rental

and sightseeing, aerial photography, crop dusting, aerial advertising and surveying, air carrier operations, aircraft sales and services, sale of aviation petroleum products whether or not conducted in conjunction with other aeronautical activity, repair and maintenance of aircraft, sale of aircraft parts, and any other activities which because of their direct relationship to the operation of aircraft can be regarded as an aeronautical activity, and that it will terminate any exclusive right to conduct an aeronautical activity now existing at such an airport before the grant of any assistance under Title 49, United States Code.

24. **Fee and Rental Structure.**

It will maintain a fee and rental structure for the facilities and services at the airport which will make the airport as self-sustaining as possible under the circumstances existing at the particular airport, taking into account such factors as the volume of traffic and economy of collection. No part of the Federal share of an airport development, airport planning or noise compatibility project for which a grant is made under Title 49, United States Code, the Airport and Airway Improvement Act of 1982, the Federal Airport Act or the Airport and Airway Development Act of 1970 shall be included in the rate basis in establishing fees, rates, and charges for users of that airport.

25. **Airport Revenues.**

a. All revenues generated by the airport and any local taxes on aviation fuel established after December 30, 1987, will be expended by it for the capital or operating costs of the airport; the local airport system; or other local facilities which are owned or operated by the owner or operator of the airport and which are directly and substantially related to the actual air transportation of passengers or property; or for noise mitigation purposes on or off the airport. The following exceptions apply to this paragraph:

1) If covenants or assurances in debt obligations issued before September 3, 1982, by the owner or operator of the airport, or provisions enacted before September 3, 1982, in governing statutes controlling the owner or operator's financing, provide for the use of the revenues from any of the airport owner or operator's facilities, including the airport, to support not only the airport but also the airport owner or operator's general debt obligations or other facilities, then this limitation on the use of all revenues generated by the airport (and, in the case of a public airport, local taxes on aviation fuel) shall not apply.

2) If the Secretary approves the sale of a privately owned airport to a public sponsor and provides funding for any portion of the public sponsor’s acquisition of land, this limitation on the use of all revenues generated by the sale shall not apply to certain proceeds from the sale. This is conditioned on repayment to the Secretary by the private owner of an amount equal to the remaining unamortized portion (amortized over a 20-year period) of any airport improvement grant made to the private owner for any purpose other than land acquisition on or after October 1, 1996, plus an amount equal to the federal share of the current fair market value of any land acquired with an airport improvement grant made to that airport on or after October 1, 1996.

3) Certain revenue derived from or generated by mineral extraction, production, lease, or other means at a general aviation airport (as defined at Section 47102 of title 49 United States Code), if the FAA determines the airport sponsor meets the requirements set forth in Sec. 813 of Public Law 112-95.

a.) As part of the annual audit required under the Single Audit Act of 1984, the sponsor will direct that the audit will review, and the resulting audit report will provide an opinion concerning, the use of airport revenue and taxes in paragraph (a), and indicating whether funds paid or transferred to the owner or operator are paid or transferred in a

manner consistent with Title 49, United States Code and any other applicable provision of law, including any regulation promulgated by the Secretary or Administrator.

b.) Any civil penalties or other sanctions will be imposed for violation of this assurance in accordance with the provisions of Section 47107 of Title 49, United States Code.

26. **Reports and Inspections.**

It will:

a. submit to the Secretary such annual or special financial and operations reports as the Secretary may reasonably request and make such reports available to the public; make available to the public at reasonable times and places a report of the airport budget in a format prescribed by the Secretary;

b. for airport development projects, make the airport and all airport records and documents affecting the airport, including deeds, leases, operation and use agreements, regulations and other instruments, available for inspection by any duly authorized agent of the Secretary upon reasonable request;

c. for noise compatibility program projects, make records and documents relating to the project and continued compliance with the terms, conditions, and assurances of this grant agreement including deeds, leases, agreements, regulations, and other instruments, available for inspection by any duly authorized agent of the Secretary upon reasonable request; and

d. in a format and time prescribed by the Secretary, provide to the Secretary and make available to the public following each of its fiscal years, an annual report listing in detail:
   1) all amounts paid by the airport to any other unit of government and the purposes for which each such payment was made; and
   2) all services and property provided by the airport to other units of government and the amount of compensation received for provision of each such service and property.

27. **Use by Government Aircraft.**

It will make available all of the facilities of the airport developed with Federal financial assistance and all those usable for landing and takeoff of aircraft to the United States for use by Government aircraft in common with other aircraft at all times without charge, except, if the use by Government aircraft is substantial, charge may be made for a reasonable share, proportional to such use, for the cost of operating and maintaining the facilities used. Unless otherwise determined by the Secretary, or otherwise agreed to by the sponsor and the using agency, substantial use of an airport by Government aircraft will be considered to exist when operations of such aircraft are in excess of those which, in the opinion of the Secretary, would unduly interfere with use of the landing areas by other authorized aircraft, or during any calendar month that –

a. by gross weights of such aircraft) is in excess of five million pounds Five (5) or more Government aircraft are regularly based at the airport or on land adjacent thereto; or

b. The total number of movements (counting each landing as a movement) of Government aircraft is 300 or more, or the gross accumulative weight of Government aircraft using the airport (the total movement of Government aircraft multiplied.

28. **Land for Federal Facilities.**

It will furnish without cost to the Federal Government for use in connection with any air traffic control or air navigation activities, or weather-reporting and communication activities related to air traffic control, any areas of land or water, or estate therein, or rights in buildings of the sponsor as the Secretary considers necessary or desirable for construction, operation, and maintenance at

Federal expense of space or facilities for such purposes. Such areas or any portion thereof will be made available as provided herein within four months after receipt of a written request from the Secretary.

29. **Airport Layout Plan.**

a. It will keep up to date at all times an airport layout plan of the airport showing:

1) boundaries of the airport and all proposed additions thereto, together with the boundaries of all offsite areas owned or controlled by the sponsor for airport purposes and proposed additions thereto;

2) the location and nature of all existing and proposed airport facilities and structures (such as runways, taxiways, aprons, terminal buildings, hangars and roads), including all proposed extensions and reductions of existing airport facilities;

3) the location of all existing and proposed nonaviation areas and of all existing improvements thereon; and

4) all proposed and existing access points used to taxi aircraft across the airport's property boundary. Such airport layout plans and each amendment, revision, or modification thereof, shall be subject to the approval of the Secretary which approval shall be evidenced by the signature of a duly authorized representative of the Secretary on the face of the airport layout plan. The sponsor will not make or permit any changes or alterations in the airport or any of its facilities which are not in conformity with the airport layout plan as approved by the Secretary and which might, in the opinion of the Secretary, adversely affect the safety, utility or efficiency of the airport.

a.) If a change or alteration in the airport or the facilities is made which the Secretary determines adversely affects the safety, utility, or efficiency of any federally owned, leased, or funded property on or off the airport and which is not in conformity with the airport layout plan as approved by the Secretary, the owner or operator will, if requested, by the Secretary (1) eliminate such adverse effect in a manner approved by the Secretary; or (2) bear all costs of relocating such property (or replacement thereof) to a site acceptable to the Secretary and all costs of restoring such property (or replacement thereof) to the level of safety, utility, efficiency, and cost of operation existing before the unapproved change in the airport or its facilities except in the case of a relocation or replacement of an existing airport facility due to a change in the Secretary's design standards beyond the control of the airport sponsor.

30. **Civil Rights.**

It will promptly take any measures necessary to ensure that no person in the United States shall, on the grounds of race, creed, color, national origin, sex, age, or disability be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination in any activity conducted with, or benefiting from, funds received from this grant.

a. Using the definitions of activity, facility and program as found and defined in §§ 21.23 (b) and 21.23 (e) of 49 CFR § 21, the sponsor will facilitate all programs, operate all facilities, or conduct all programs in compliance with all non-discrimination requirements imposed by, or pursuant to these assurances.

b. Applicability

1) Programs and Activities. If the sponsor has received a grant (or other federal assistance) for any of the sponsor's program or activities, these requirements extend to all of the

sponsor's programs and activities.

2) Facilities. Where it receives a grant or other federal financial assistance to construct, expand, renovate, remodel, alter or acquire a facility, or part of a facility, the assurance extends to the entire facility and facilities operated in connection therewith.

3) Real Property. Where the sponsor receives a grant or other Federal financial assistance in the form of, or for the acquisition of real property or an interest in real property, the assurance will extend to rights to space on, over, or under such property.

c. Duration.

The sponsor agrees that it is obligated to this assurance for the period during which Federal financial assistance is extended to the program, except where the Federal financial assistance is to provide, or is in the form of, personal property, or real property, or interest therein, or structures or improvements thereon, in which case the assurance obligates the sponsor, or any transferee for the longer of the following periods:

1) So long as the airport is used as an airport, or for another purpose involving the provision of similar services or benefits; or

2) So long as the sponsor retains ownership or possession of the property.

d. Required Solicitation Language. It will include the following notification in all solicitations for bids, Requests For Proposals for work, or material under this grant agreement and in all proposals for agreements, including airport concessions, regardless of funding source:

"The **(County of Cochise)**, in accordance with the provisions of Title VI of the Civil Rights Act of 1964 (78 Stat. 252, 42 U.S.C. §§ 2000d to 2000d-4) and the Regulations, hereby notifies all bidders that it will affirmatively ensure that any contract entered into pursuant to this advertisement, disadvantaged business enterprises and airport concession disadvantaged business enterprises will be afforded full and fair opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, or national origin in consideration for an award."

e. Required Contract Provisions.

1) It will insert the non-discrimination contract clauses requiring compliance with the acts and regulations relative to non-discrimination in Federally-assisted programs of the DOT, and incorporating the acts and regulations into the contracts by reference in every contract or agreement subject to the non-discrimination in Federally-assisted programs of the DOT acts and regulations.

2) It will include a list of the pertinent non-discrimination authorities in every contract that is subject to the non-discrimination acts and regulations.

3) It will insert non-discrimination contract clauses as a covenant running with the land, in any deed from the United States effecting or recording a transfer of real property, structures, use, or improvements thereon or interest therein to a sponsor.

4) It will insert non-discrimination contract clauses prohibiting discrimination on the basis of race, color, national origin, creed, sex, age, or handicap as a covenant running with the land, in any future deeds, leases, license, permits, or similar instruments entered into by the sponsor with other parties:

a.) For the subsequent transfer of real property acquired or improved under the applicable activity, project, or program; and

b.) For the construction or use of, or access to, space on, over, or under real property acquired or improved under the applicable activity, project, or program.

f. It will provide for such methods of administration for the program as are found by the Secretary to give reasonable guarantee that it, other recipients, sub-recipients, sub-grantees, contractors, subcontractors, consultants, transferees, successors in interest, and other participants of Federal financial assistance under such program will comply with all requirements imposed or pursuant to the acts, the regulations, and this assurance.

g. It agrees that the United States has a right to seek judicial enforcement with regard to any matter arising under the acts, the regulations, and this assurance.

31. **Disposal of Land.**

a. For land purchased under a grant for airport noise compatibility purposes, including land serving as a noise buffer, it will dispose of the land, when the land is no longer needed for such purposes, at fair market value, at the earliest practicable time. That portion of the proceeds of such disposition which is proportionate to the United States' share of acquisition of such land will be, at the discretion of the Secretary, (1) reinvested in another project at the airport, or (2) transferred to another eligible airport as prescribed by the Secretary. The Secretary shall give preference to the following, in descending order, (1) reinvestment in an approved noise compatibility project, (2) reinvestment in an approved project that is eligible for grant funding under Section 47117(e) of title 49 United States Code, (3) reinvestment in an approved airport development project that is eligible for grant funding under Sections 47114, 47115, or 47117 of title 49 United States Code, (4) transferred to an eligible sponsor of another public airport to be reinvested in an approved noise compatibility project at that airport, and (5) paid to the Secretary for deposit in the Airport and Airway Trust Fund. If land acquired under a grant for noise compatibility purposes is leased at fair market value and consistent with noise buffering purposes, the lease will not be considered a disposal of the land. Revenues derived from such a lease may be used for an approved airport development project that would otherwise be eligible for grant funding or any permitted use of airport revenue.

b. For land purchased under a grant for airport development purposes (other than noise compatibility), it will, when the land is no longer needed for airport purposes, dispose of such land at fair market value or make available to the Secretary an amount equal to the United States' proportionate share of the fair market value of the land. That portion of the proceeds of such disposition which is proportionate to the United States' share of the cost of acquisition of such land will, (1) upon application to the Secretary, be reinvested or transferred to another eligible airport as prescribed by the Secretary. The Secretary shall give preference to the following, in descending order: (1) reinvestment in an approved noise compatibility project, (2) reinvestment in an approved project that is eligible for grant funding under Section 47117(e) of title 49 United States Code, (3) reinvestment in an approved airport development project that is eligible for grant funding under Sections 47114, 47115, or 47117 of title 49 United States Code, (4) transferred to an eligible sponsor of another public airport to be reinvested in an approved noise compatibility project at that airport, and (5) paid to the Secretary for deposit in the Airport and Airway Trust Fund.

c. Land shall be considered to be needed for airport purposes under this assurance if (1) it may be needed for aeronautical purposes (including runway protection zones) or serve as noise buffer land, and (2) the revenue from interim uses of such land contributes to the financial self-sufficiency of the airport. Further, land purchased with a grant received by an airport operator or owner before December 31, 1987, will be considered to be needed for airport purposes if the Secretary or Federal agency making such grant before December 31, 1987, was

notified by the operator or owner of the uses of such land, did not object to such use, and the land continues to be used for that purpose, such use having commenced no later than December 15, 1989.

d. Disposition of such land under (a) (b) or (c) will be subject to the retention or reservation of any interest or right therein necessary to ensure that such land will only be used for purposes which are compatible with noise levels associated with operation of the airport.

32. **Engineering and Design Services.**

It will award each contract, or sub-contract for program management, construction management, planning studies, feasibility studies, architectural services, preliminary engineering, design, engineering, surveying, mapping or related services with respect to the project in the same manner as a contract for architectural and engineering services is negotiated under Title IX of the Federal Property and Administrative Services Act of 1949 or an equivalent qualifications-based requirement prescribed for or by the sponsor of the airport.

33. **Foreign Market Restrictions.**

It will not allow funds provided under this grant to be used to fund any project which uses any product or service of a foreign country during the period in which such foreign country is listed by the United States Trade Representative as denying fair and equitable market opportunities for products and suppliers of the United States in procurement and construction.

34. **Policies, Standards, and Specifications.**

It will carry out the project in accordance with policies, standards, and specifications approved by the Secretary including, but not limited to, the advisory circulars listed in the Current FAA Advisory Circulars for AIP projects, dated January 24, 2017 and included in this grant, and in accordance with applicable state policies, standards, and specifications approved by the Secretary.

35. **Relocation and Real Property Acquisition.**

a. It will be guided in acquiring real property, to the greatest extent practicable under State law, by the land acquisition policies in Subpart B of 49 CFR Part 24 and will pay or reimburse property owners for necessary expenses as specified in Subpart B.

b. It will provide a relocation assistance program offering the services described in Subpart C and fair and reasonable relocation payments and assistance to displaced persons as required in Subpart D and E of 49 CFR Part 24.

c. It will make available within a reasonable period of time prior to displacement, comparable replacement dwellings to displaced persons in accordance with Subpart E of 49 CFR Part 24.

36. **Access By Intercity Buses.**

The airport owner or operator will permit, to the maximum extent practicable, intercity buses or other modes of transportation to have access to the airport; however, it has no obligation to fund special facilities for intercity buses or for other modes of transportation.

37. **Disadvantaged Business Enterprises.**

The sponsor shall not discriminate on the basis of race, color, national origin or sex in the award and performance of any DOT-assisted contract covered by 49 CFR Part 26, or in the award and performance of any concession activity contract covered by 49 CFR Part 23. In addition, the sponsor shall not discriminate on the basis of race, color, national origin or sex in the administration of its DBE and ACDBE programs or the requirements of 49 CFR Parts 23 and 26. The sponsor shall take all necessary and reasonable steps under 49 CFR Parts 23 and 26 to ensure

nondiscrimination in the award and administration of DOT-assisted contracts, and/or concession contracts. The sponsor's DBE and ACDBE programs, as required by 49 CFR Parts 26 and 23, and as approved by DOT, are incorporated by reference in this agreement. Implementation of these programs is a legal obligation and failure to carry out its terms shall be treated as a violation of this agreement. Upon notification to the sponsor of its failure to carry out its approved program, the Department may impose sanctions as provided for under Parts 26 and 23 and may, in appropriate cases, refer the matter for enforcement under 18 U.S.C. 1001 and/or the Program Fraud Civil Remedies Act of 1936 (31 U.S.C. 3801).

38. **Hangar Construction.**

    If the airport owner or operator and a person who owns an aircraft agree that a hangar is to be constructed at the airport for the aircraft at the aircraft owner's expense, the airport owner or operator will grant to the aircraft owner for the hangar a long term lease that is subject to such terms and conditions on the hangar as the airport owner or operator may impose.

39. **Competitive Access.**

    a. If the airport owner or operator of a medium or large hub airport (as defined in section 47102 of title 49, U.S.C.) has been unable to accommodate one or more requests by an air carrier for access to gates or other facilities at that airport in order to allow the air carrier to provide service to the airport or to expand service at the airport, the airport owner or operator shall transmit a report to the Secretary that-

        1) Describes the requests;

        2) Provides an explanation as to why the requests could not be accommodated; and

        3) Provides a time frame within which, if any, the airport will be able to accommodate the requests.

    b. Such report shall be due on either February 1 or August 1 of each year if the airport has been unable to accommodate the request(s) in the six month period prior to the applicable due date.

FAA
Airports

Current FAA Advisory Circulars Required for Use in AIP Funded and PFC Approved Projects

Updated: 1/24/2017

View the most current versions of these ACs and any associated changes at:
http://www.faa.gov/airports/resources/advisory_circulars and
http://www.faa.gov/regulations_policies/advisory_circulars/

NUMBER	TITLE
70/7460-1L Change 1	Obstruction Marking and Lighting
150/5020-1	Noise Control and Compatibility Planning for Airports
150/5070-6B Changes 1- 2	Airport Master Plans
150/5070-7 Change 1	The Airport System Planning Process
150/5100-13B	Development of State Standards for Nonprimary Airports
150/5200-28F	Notices to Airmen (NOTAMS) for Airport Operators
150/5200-30D	Airport Field Condition Assessments and Winter Operations Safety
150/5200-31C Changes 1-2	Airport Emergency Plan
150/5210-5D	Painting, Marking, and Lighting of Vehicles Used on an Airport
150/5210-7D	Aircraft Rescue and Fire Fighting Communications
150/5210-13C	Airport Water Rescue Plans and Equipment
150/5210-14B	Aircraft Rescue Fire Fighting Equipment, Tools and Clothing
150/5210-15A	Aircraft Rescue and Firefighting Station Building Design

NUMBER	TITLE
150/5210-18A	Systems for Interactive Training of Airport Personnel
150/5210-19A	Driver's Enhanced Vision System (DEVS)
150/5220-10E	Guide Specification for Aircraft Rescue and Fire Fighting (ARFF) Vehicles
150/5220-16D	Automated Weather Observing Systems (AWOS) for Non-Federal Applications
150/5220-17B	Aircraft Rescue and Fire Fighting (ARFF) Training Facilities
150/5220-18A	Buildings for Storage and Maintenance of Airport Snow and Ice Control Equipment and Materials
150/5220-20A	Airport Snow and Ice Control Equipment
150/5220-21C	Aircraft Boarding Equipment
150/5220-22B	Engineered Materials Arresting Systems (EMAS) for Aircraft Overruns
150/5220-23	Frangible Connections
150/5220-24	Foreign Object Debris Detection Equipment
150/5220-25	Airport Avian Radar Systems
150/5220-26 Changes 1-2	Airport Ground Vehicle Automatic Dependent Surveillance - Broadcast (ADS-B) Out Squitter Equipment
150/5300-7B	FAA Policy on Facility Relocations Occasioned by Airport Improvements of Changes
150/5300-13A Change 1	Airport Design
150/5300-14C	Design of Aircraft Deicing Facilities
150/5300-16A	General Guidance and Specifications for Aeronautical Surveys: Establishment of Geodetic Control and Submission to the National Geodetic Survey
150/5300-17C	Standards for Using Remote Sensing Technologies in Airport Surveys
150/5300-18B Change 1	General Guidance and Specifications for Submission of Aeronautical Surveys to NGS: Field Data Collection and Geographic Information System (GIS) Standards
150/5320-5D	Airport Drainage Design
150/5320-6F	Airport Pavement Design and Evaluation

NUMBER	TITLE
150/5320-12C Changes 1-8	Measurement, Construction, and Maintenance of Skid Resistant Airport Pavement Surfaces
150/5320-15A	Management of Airport Industrial Waste
150/5235-4B	Runway Length Requirements for Airport Design
150/5335-5C	Standardized Method of Reporting Airport Pavement Strength - PCN
150/5340-1L	Standards for Airport Markings
150/5340-5D	Segmented Circle Airport Marker System
150/5340-18F	Standards for Airport Sign Systems
150/5340-26C	Maintenance of Airport Visual Aid Facilities
150/5340-30H	Design and Installation Details for Airport Visual Aids
150/5345-3G	Specification for L-821, Panels for the Control of Airport Lighting
150/5345-5B	Circuit Selector Switch
150/5345-7F	Specification for L-824 Underground Electrical Cable for Airport Lighting Circuits
150/5345-10H	Specification for Constant Current Regulators and Regulator Monitors
150/5345-12F	Specification for Airport and Heliport Beacons
150/5345-13B	Specification for L-841 Auxiliary Relay Cabinet Assembly for Pilot Control of Airport Lighting Circuits
150/5345-26D	FAA Specification For L-823 Plug and Receptacle, Cable Connectors
150/5345-27E	Specification for Wind Cone Assemblies
150/5345-28G	Precision Approach Path Indicator (PAPI) Systems
150/5345-39D	Specification for L-853, Runway and Taxiway Retro reflective Markers
150/5345-42H	Specification for Airport Light Bases, Transformer Housings, Junction Boxes, and Accessories
150/5345-43H	Specification for Obstruction Lighting Equipment
150/5345-44K	Specification for Runway and Taxiway Signs
150/5345-45C	Low-Impact Resistant (LIR) Structures

NUMBER	TITLE
150/5345-46E	Specification for Runway and Taxiway Light Fixtures
150/5345-47C	Specification for Series to Series Isolation Transformers for Airport Lighting Systems
150/5345-49C	Specification L-854, Radio Control Equipment
150/5345-50B	Specification for Portable Runway and Taxiway Lights
150/5345-51B	Specification for Discharge-Type Flashing Light Equipment
150/5345-52A	Generic Visual Glideslope Indicators (GVGI)
150/5345-53D	Airport Lighting Equipment Certification Program
150/5345-54B	Specification for L-884, Power and Control Unit for Land and Hold Short Lighting Systems
150/5345-55A	Specification for L-893, Lighted Visual Aid to Indicate Temporary Runway Closure
150/5345-56B	Specification for L-890 Airport Lighting Control and Monitoring System (ALCMS)
150/5360-12F	Airport Signing and Graphics
150/5360-13 Change 1	Planning and Design Guidelines for Airport Terminal Facilities
150/5360-14	Access to Airports By Individuals With Disabilities
150/5370-2F	Operational Safety on Airports During Construction
150/5370-10G	Standards for Specifying Construction of Airports
150/5370-11B	Use of Nondestructive Testing in the Evaluation of Airport Pavements
150/5370-13A	Off-Peak Construction of Airport Pavements Using Hot-Mix Asphalt
150/5370-15B	Airside Applications for Artificial Turf
150/5370-16	Rapid Construction of Rigid (Portland Cement Concrete) Airfield Pavements
150/5370-17	Airside Use of Heated Pavement Systems
150/5390-2C	Heliport Design
150/5395-1A	Seaplane Bases

THE FOLLOWING ADDITIONAL APPLY TO AIP PROJECTS ONLY

Updated: 01/24/2017

NUMBER	TITLE
150/5100-14E Change 1	Architectural, Engineering, and Planning Consultant Services for Airport Grant Projects
150/5100-17 Changes 1 - 6	Land Acquisition and Relocation Assistance for Airport Improvement Program Assisted Projects
150/5300-15A	Use of Value Engineering for Engineering Design of Airport Grant Projects
150/5320-17A	Airfield Pavement Surface Evaluation and Rating Manuals
150/5370-12B	Quality Management for Federally Funded Airport Construction Projects
150/5380-6C	Guidelines and Procedures for Maintenance of Airport Pavements
150/5380-7B	Airport Pavement Management Program
150/5380-9	Guidelines and Procedures for Measuring Airfield Pavement Roughness

COCHISE COUNTY GRANT APPROVAL FORM

Form Initiator: Date Prepared:

Point of Contact: Phone Number:

Department:

PRIMARY GRANT

Primary Grantor: CFDA: www.CFDA.gov

Grant Title:

Grant Term From: To: Total Award Amount:

New Grant: Yes No Grant No:

Amendment: Yes No Amendment No:

GL Account No: If new, Finance will assign a fund number.

Strategic Plan: District: Mandated by Law Yes No

Number of Positions Funded:

Asset(s) Acquired:

Grantor's reimbursement mileage rate:

Health or pension reimbursement: Other reimbursement:

Briefly describe the purpose of the grant:

If this is a mandated service, cite the source. If not mandated, cite indications of local customer support for this service.

PRIMARY FUNDING SOURCE

Funding Year: Federal Funds 332.100

State Funds 336.100

County Funds 391.000

Other Funds:

Total Funds:

Has this amount been budgeted? Yes No

Method of collecting funds: Lump Sum Quarterly Draw Reimbursement

Is revertment of unexpected funds required at the end of grant period? Yes No

(a) Total indirect (A-87) Cost Allocation: (b) Amount of overhead allowed by grant:

County Subsidy (a) - (b) =

Is there a Secondary Grant Award associated with this Grant? Yes No

Name of Grant: Funder:

If yes please complete an additional grant approval form.

Is County match required? Yes No

County match source:

County match dollar amount or percentage:

NOTE: Please attach this Grant Approval form to the AgendaQuick item. The AgendaQuick "Grant Approval template" must be used. Once approved by the Board of Supervisors, the department is responsible for sending a copy of the fully executed GRANT DOCUMENT *(not this approval form)* to the Finance Department.