



# CONSTRUCTION PLANS FOR SPRUCE AVENUE WASH IMPROVEMENTS CEDAR AVENUE TO DORTHA AVENUE FLAGSTAFF, ARIZONA

LOCATED IN SECTION 11, TOWNSHIP 21 NORTH, RANGE 7 EAST, GILA AND SALT BASE  
AND MERIDIAN, COCONINO COUNTY, FLAGSTAFF, ARIZONA

### PROJECT OWNER/DEVELOPER:

CITY OF FLAGSTAFF  
211 W. ASPEN AVE  
FLAGSTAFF, AZ 86001

### PROJECT ENGINEER:

SHEPHARD-WESNITZER INC.  
CONTACT: STEPHEN IRWIN  
110 WEST DALE AVE  
FLAGSTAFF, AZ 86001  
(928) 773-0354

### PROPERTY INFORMATION:

PROJECT PARCELS:  
APN#: 109-08-148B, 109-08-150,  
109-08-151, 109-08-152, 109-08-153,  
109-08-154, 109-08-155, 109-08-156,  
109-08-157, 109-08-158, 109-08-165A,  
109-08-167, 109-08-168

ZONING: HIGH DENSITY RESIDENTIAL (HR)  
COMMUNITY COMMERCIAL (CC)

2100 EAST DORTHA AVENUE  
FLAGSTAFF, AZ 86004

### GEOTECHNICAL REPORT:

WT REFERENCE NO. 2521JW291  
WESTERN TECHNOLOGIES INC.  
2400 EAST HUNTINGTON DRIVE  
FLAGSTAFF, AZ 86004  
(928) 774-8700

### CITY CONCEPT APPROVAL

THE CITY APPROVES THESE PLANS FOR CONCEPT ONLY.  
ALL LIABILITY FOR ERRORS AND OMISSIONS IS THE  
RESPONSIBILITY OF THE DESIGN ENGINEER.

#### CITY ENGINEER:

BY: \_\_\_\_\_ DATE: \_\_\_\_\_

#### CITY PUBLIC WORKS DIRECTOR

BY: \_\_\_\_\_ DATE: \_\_\_\_\_

#### CITY WATER SERVICES DIRECTOR

BY: \_\_\_\_\_ DATE: \_\_\_\_\_

### AUTHORIZATION TO CONSTRUCT:

THE SIGNATURES ABOVE ARE REQUIRED BEFORE THE  
CONTRACTOR CAN COMMENCE. UNSIGNED, THESE PLANS  
HAVE NOT BEEN COMPLETED WITH RESPECT TO AGENCY  
REVIEW AND APPROVAL.

### UTILITY COMPANY APPROVAL

#### ARIZONA PUBLIC SERVICE

BY: \_\_\_\_\_ DATE: \_\_\_\_\_

#### UNISOURCE ENERGY SERVICES

BY: \_\_\_\_\_ DATE: \_\_\_\_\_

#### LUMEN

BY: \_\_\_\_\_ DATE: \_\_\_\_\_

#### ALTICE USA

BY: \_\_\_\_\_ DATE: \_\_\_\_\_

#### UTILITY COMPANY CONTACTS

APS  
CONTACT: CHAD BROOKS  
2200 E. HUNTINGTON  
FLAGSTAFF, AZ 86004  
CHAD.BROOKS@APS.COM  
PHONE: (928) 773-6440

UNISOURCE ENERGY SERVICES  
CONTACT: MARTIN CONBOY  
2901 W SHAMRELL BLVD #110  
FLAGSTAFF, AZ 86001  
MCONBOY@UESAZ.COM  
PHONE: (928) 226-2269

LUMEN  
CONTACT: MANUEL HERNANDEZ  
112 NORTH BEAVER STREET  
FLAGSTAFF, AZ 86001  
MANUEL.HERNANDEZ4@CENTURYLINK.COM  
PHONE: (928) 779-4935

ALTICE USA  
CONTACT: SANFORD YAZZIE  
1601 SOUTH PLAZA WAY  
FLAGSTAFF, AZ 86001  
SANFORD.YAZZIE@ALTICEUSA.COM  
PHONE: (928) 266-0672

### UTILITY CONFLICT

UNDERGROUND UTILITIES SHOWN ARE APPROXIMATE AND WERE COMPILED FROM RECORD DRAWINGS,  
SURVEY, AND CONSTRUCTION PLANS FURNISHED BY OTHERS. THE CONTRACTOR IS ULTIMATELY  
RESPONSIBLE FOR DETERMINING THE ACTUAL LOCATIONS OF ALL UNDERGROUND LINES THAT MAY  
AFFECT WORK PRIOR TO CONSTRUCTION. ACTION IS BEING TAKEN TO COORDINATE WITH ALL FRANCHISE  
UTILITY COMPANIES.

UTILITY RESPONSES FROM APS, ALTICE U.S.A., LUMEN, AND UNISOURCE HAVE BEEN RECEIVED  
REGARDING ANY APPARENT UTILITY CONFLICT. CONFLICTS WITH UNISOURCE AND APS WILL BE  
ADDRESSED DURING CONSTRUCTION.

### RESOURCE PRESERVATION

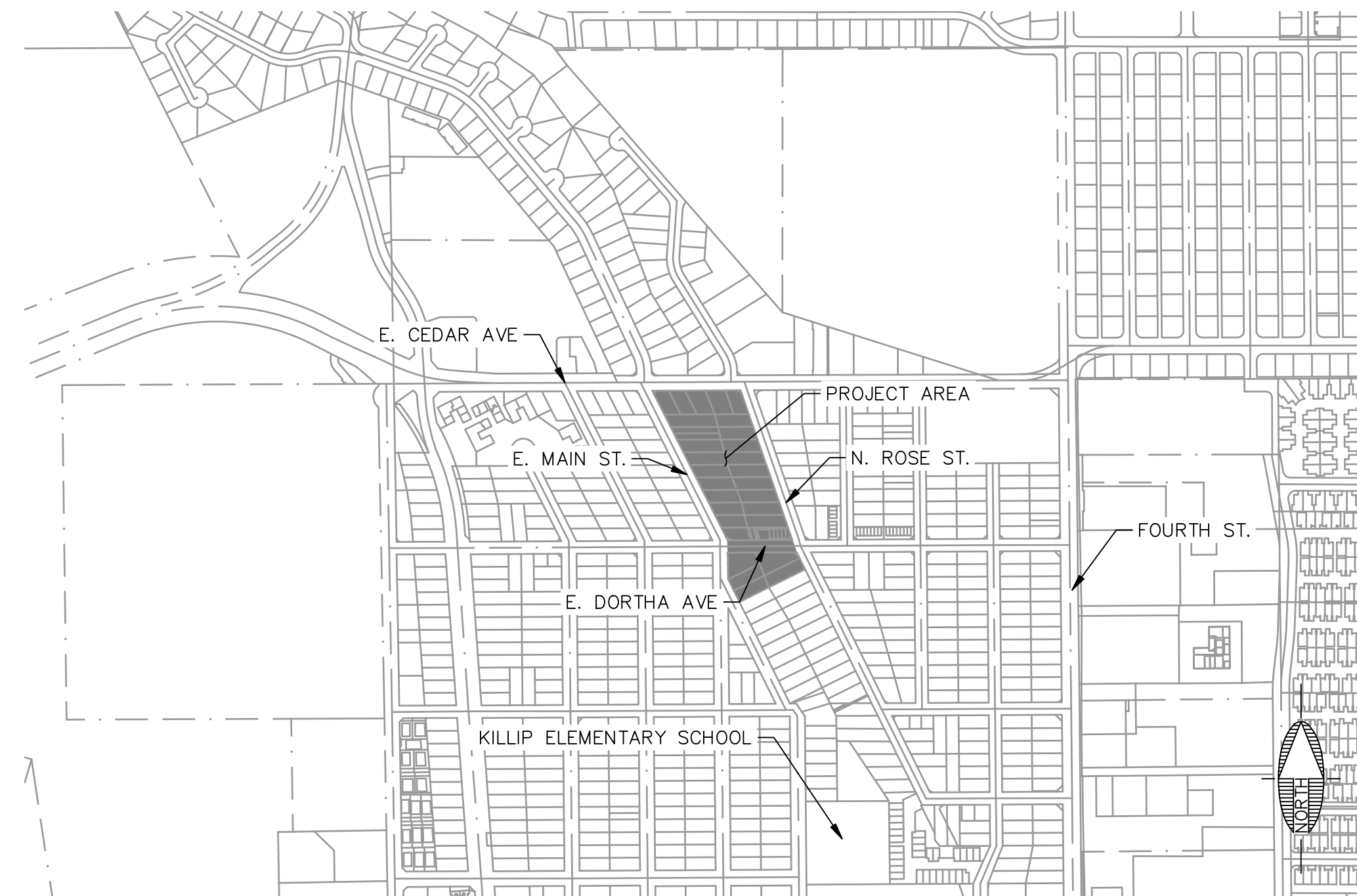
THE PROJECT DOES NOT CURRENTLY FALL WITHIN THE CITY OF FLAGSTAFF  
RESOURCE PROTECTION OVERLAY ZONE AND DOES NOT REQUIRE A  
RESOURCE PROTECTION PLAN.

### FEMA DESIGNATION

THIS PROJECT IS LOCATED WITHIN ZONE AE OF FEMA FIRM MAP  
#04005C6828G, EFFECTIVE SEPTEMBER 3, 2010. ZONE AE IS DESCRIBED AS  
AREAS DETERMINED TO BE INSIDE THE 1% ANNUAL CHANCE FLOODPLAIN.

### SOURCE OF PROJECT INFORMATION

BOUNDARY INFORMATION AND TOPOGRAPHIC INFORMATION PROVIDED BY SWI,  
DATED DECEMBER 14, 2020.



VICINITY MAP  
N.T.S.

### LEGEND

—	ROW	- - - - -	EX. LOT LINE
- - - - -	BUILDING OUTLINE	- - - - -	EX. EASEMENT
—	EXISTING MAJOR CONTOUR	—	EX. 100-YR FLOODPLAIN
- - - - -	EXISTING MINOR CONTOUR	—	EX. GAS
—	PROPOSED MAJOR CONTOUR	—	EX. OVERHEAD ELECTRICAL
- - - - -	PROPOSED MINOR CONTOUR	—	EX. WATER LINE
- - - - -	PROPOSED EASEMENT	—	EX. SEWER LINE
—	PROPOSED GRADING LIMITS	—	EX. STORM DRAIN PIPE
—	STORM DRAIN PIPE	—	EX. ROAD STRIPING
—	WATER METER	—	EX. FIRE HYDRANT
—	SEWER MANHOLE	—	EX. VALVE
—	STORM DRAIN MANHOLE	—	EX. SEWER MANHOLE
—	STORM DRAIN GRATE	—	EX. LIGHT POLE
—	GATE VALVE	—	EX. SIGNAGE
—	DRAINAGE ARROW		

SHEET INDEX		
SHEET NO.	DRAWING NO.	DESCRIPTION
1	CVR	COVER SHEET
2	GN01	GENERAL NOTES
3	DT01	DETAIL SHEET
4	SV01	SURVEY CONTROL AND DEMOLITION PLAN (1)
5	SV02	SURVEY CONTROL AND DEMOLITION PLAN (2)
6	GD01	GRADING AND DRAINAGE PLAN (1)
7	GD02	GRADING AND DRAINAGE PLAN (2)
8	GD03	GRADING AND DRAINAGE PROFILE (1)
9	GD04	GRADING AND DRAINAGE PROFILE (2)
10	IP01	IMPROVEMENT PLAN (1)
11	IP02	IMPROVEMENT PLAN (2)
12	EC01	EROSION CONTROL PLAN
13	EC02	EROSION CONTROL NOTES & DETAILS

CITY OF FLAGSTAFF  
APPROVAL STAMP



PRELIMINARY  
NOT FOR CONSTRUCTION,  
BIDDING OR RECORDING

C.O.F. #PZ-21-00259

FLAGSTAFF ARIZONA

SPRUCE AVE. WASH IMPROVEMENTS

COVER SHEET

JOB NO: 20285  
DATE: MAR 22  
SCALE: AS SHOWN  
DRAWN: HAS  
DESIGN: KMF  
CHECKED: BD

110 W. Dale Avenue  
Flagstaff, AZ 86001  
928.773.0354  
928.774.8934 fax  
www.swi.az.com

SWI  
Shephard Wesnitzer, Inc.

NO.	DESCRIPTION	BY	DATE

Call at least two full working days before you begin excavation.  
ARIZONA 801  
Arizona Blue Stakes, Inc.  
808 84-11 or 1-800-514-1111 (928-5348)

DRAWING NO. CVR

SHT NO. 1 OF 13

FILE: P:\2020\20205 DRAWINGS\CONSTRUCTION PLANS\20285 - GENERAL NOTES.DWG (JERIKSON) PLOTTED: Mon, 08/20/2022 4:25:30pm

### C.O.F. GENERAL NOTES

- APPROVAL OF THESE PLANS BY THE CITY ENGINEER IS FOR A ONE (1) YEAR PERIOD, SUBSEQUENT TO THE DATE OF APPROVAL. CONSTRUCTION WORK IS NOT STARTED WITHIN THE ONE (1) YEAR PERIOD, OR HAS BEEN DISCONTINUED FOR ANY REASON FOR LONGER THAN ONE (1) YEAR, THE PLANS SHALL BE RESUBMITTED FOR REVIEW AND RE-APPROVAL.
- PLAN REVIEW BY THE CITY DOES NOT EXTEND TO MATERIAL QUANTITIES SHOWN ON THE PLANS.
- A PUBLIC WORKS PERMIT, ISSUED BY THE CITY, IS REQUIRED FOR ALL WORK IN CITY RIGHTS-OF-WAY OR EASEMENTS AND FOR CONSTRUCTION OF ANY IMPROVEMENTS INTENDED TO BECOME PUBLIC PROPERTY.
- THE CITY SHALL BE NOTIFIED TWENTY-FOUR (24) HOURS PRIOR TO BEGINNING DIFFERENT PHASES OF CONSTRUCTION SO THAT CITY INSPECTORS MAY BE SCHEDULED.
- ALL MATERIALS AND WORKMANSHIP SHALL COMPLY WITH TITLE 13, ENGINEERING DESIGN AND STANDARDS AND SPECIFICATIONS FOR NEW INFRASTRUCTURE, CURRENT "MAG UNIFORM STANDARD SPECIFICATIONS AND DETAILS FOR PUBLIC WORKS CONSTRUCTION", THE CITY OF FLAGSTAFF STORMWATER DESIGN MANUAL, AND WITH GENERALLY ACCEPTED ENGINEERING DESIGN AND CONSTRUCTION PRACTICE. ALL WORK AND MATERIALS, WHICH DO NOT CONFORM TO THE STANDARDS AND SPECIFICATIONS, ARE SUBJECT TO REMOVAL AND REPLACEMENT AT THE CONTRACTOR'S EXPENSE. THE CONTRACTOR IS RESPONSIBLE FOR REVIEWING CHAPTERS 13-21 OF THESE STANDARDS WHICH MAKES minor MODIFICATIONS TO CERTAIN MAG SPECIFICATIONS AND DETAILS.
- ANY WORK PERFORMED WITHOUT THE KNOWLEDGE AND APPROVAL OF THE CITY ENGINEER OR HIS AUTHORIZED REPRESENTATIVE IS SUBJECT TO REMOVAL AND REPLACEMENT AT THE CONTRACTOR'S EXPENSE.
- THE CITY ENGINEER OR HIS AUTHORIZED REPRESENTATIVE MAY SUSPEND THE WORK BY WRITTEN NOTICE WHEN, IN HIS JUDGMENT, PROGRESS IS UNSATISFACTORY, WORK BEING DONE IS UNAUTHORIZED OR DEFECTIVE, WEATHER CONDITIONS ARE UNSUITABLE, OR THERE IS DANGER TO THE PUBLIC HEALTH OR SAFETY.
- THE CITY ENGINEER MAY ORDER ANY OR ALL MATERIALS USED IN THE WORK TO BE TESTED ACCORDING TO THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO) AND THE AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM) STANDARDS. THE CONTRACTOR SHALL, AT HIS EXPENSE, SUPPLY ALL SAMPLES REQUIRED FOR TESTING.
- ACCESS WHICH MEETS SECTION 13-13-004-0001, FIRE ACCESS SHALL BE IN PLACE AND APPROVED BEFORE AND AT ALL TIMES DURING ON-SITE COMBUSTIBLE CONSTRUCTION AND/OR PRIOR TO ISSUANCE OF BUILDING PERMITS IN NEW SUBDIVISIONS. FIRE DEPARTMENT AND ENGINEERING SECTION APPROVAL IS REQUIRED FOR OBSTRUCTION OF ACCESS OR WATER SYSTEM SHUTDOWN.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE OF THE STREETS AND OF PARTIALLY COMPLETED PORTIONS OF THE WORK UNTIL FINAL ACCEPTANCE OF THE WORK. THE CONTRACTOR SHALL SUBMIT TO THE CITY ENGINEER FOR APPROVAL A CONSTRUCTION SCHEDULE FOR ANY STREETS REQUIRED TO BE CLOSED OR PARTIALLY CLOSED FOR THE CONSTRUCTION ACTIVITY. THE CONTRACTOR SHALL REOPEN THE STREETS NO LATER THAN THE OPENING DATE SHOWN ON THE CONSTRUCTION SCHEDULE OR UPON ORDER OF THE CITY ENGINEER. THE REGULATION AND CONTROL OF CONSTRUCTION TRAFFIC SHALL BE AS DIRECTED BY THE CITY ENGINEER OR HIS AUTHORIZED REPRESENTATIVE.
- APPROVAL OF A PORTION OF THE WORK IN PROGRESS DOES NOT GUARANTEE ITS FINAL ACCEPTANCE. TESTING AND EVALUATION MAY CONTINUE UNTIL WRITTEN FINAL ACCEPTANCE OF A COMPLETE WORKABLE UNIT. ANY DEFECTS WHICH APPEAR IN THE WORK WITHIN ONE (1) YEAR FROM THE DATE OF ACCEPTANCE AND WHICH ARE DUE TO IMPROPER WORKMANSHIP OR INFERIOR MATERIALS SUPPLIED SHALL BE CORRECTED BY OR AT THE EXPENSE OF THE OWNER/DEVELOPER OR THE CONTRACTOR.
- ACCEPTANCE OF COMPLETED PUBLIC IMPROVEMENTS WILL NOT BE GIVEN UNTIL DEFECTIVE OR UNAUTHORIZED WORK IS REMOVED, AND FINAL CLEAN-UP IS COMPLETE.
- LOCATION OF UNDERGROUND UTILITIES BEFORE WORK IS BEGUN IS TO BE ACCOMPLISHED IN ACCORDANCE WITH ARS 40-360-22.
- IF WORK IS DONE ON PRIVATE PROPERTY IN RELATION TO A PROJECT CONSTRUCTED UNDER THESE STANDARDS, THE CONTRACTOR WILL PROVIDE THE CITY WITH WRITTEN AUTHORIZATION FROM THE PRIVATE OWNER TO DO SO.
- THE ESTABLISHMENT AND USE OF TEMPORARY CONSTRUCTION YARDS SHALL CONFORM TO THE CURRENT CITY ZONING CODE STANDARDS FOR "TEMPORARY USES"
- ALL EXCAVATED MATERIAL SHALL BE DISPOSED OF IN ACCORDANCE WITH APPLICABLE CITY CODES AND REGULATIONS. THE CONTRACTOR SHALL OBTAIN ALL REQUIRED CITY APPROVALS AND PERMITS, AS DEEMED NECESSARY BY THE CITY, TO DISPOSE OF EXCAVATED MATERIAL.
- ALL CONSTRUCTION STAKING SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR/DEVELOPER AND PERFORMED UNDER THE DIRECT SUPERVISION OF A REGISTERED LAND SURVEYOR OR CIVIL ENGINEER.
- ALL TRAFFIC SIGN SHEETING SHALL BE TYPE VII AS DESIGNED BY ASTM D4956-07E1 STANDARD SPECIFICATIONS FOR RETRO REFLECTIVE SHEETING FOR TRAFFIC CONTROL, UNLESS SPECIFIED OTHERWISE ON THE CONSTRUCTION PLANS.
- WHEN THE CONSTRUCTION PLANS SPECIFY GRAFFITI CONTROL ON BRIDGES OR OTHER STRUCTURES, THE CONTRACTOR SHALL SEAL THE STRUCTURE FIRST USING MONOCHEM AQUASEAL ME 12 AND THEN APPLY MONOCHEM PERMASHIELD, SACRIFICIAL GRAFFITI CONTROL SYSTEM (OR APPROVED EQUAL).
- ALL AREAS DISTURBED DURING CONSTRUCTION SHALL BE STABILIZED AND RESEEDED IN ACCORDANCE WITH CHAPTER 13-17 OF THIS TITLE, IN THE EVENT THAT THE CONSTRUCTION ACTIVITY DISTURBS MORE THAN ONE (1) ACRE, A STORM WATER POLLUTION PREVENTION PLAN (SWPPP) SHALL BE PREPARED IN ORDER TO OBTAIN A CONSTRUCTION GENERAL PERMIT FROM ADEQ. (ORD. 22017-22, REP&REEN, 07/05/2017)

### C.O.F. WATER AND SEWER NOTES

ALL DESIGN, CONSTRUCTION, TESTING AND INSPECTION SHALL CONFORM TO THE ADEQ REQUIREMENTS: WATER DISTRIBUTION IN ACCORDANCE WITH BULLETINS 10 AND 8, AND SEWER COLLECTION IN ACCORDANCE WITH C.TITLE 18, IN THE EVENT THE ADEQ REQUIREMENTS CONFLICT WITH THESE STANDARDS, THE MORE RESTRICTIVE SHALL APPLY.

- ROUGH GRADING SHALL BE COMPLETED WITHIN ONE-TENTH (1/10) OF A FOOT OF PLAN GRADE AND APPROVED BY THE CITY ENGINEER'S AUTHORIZED REPRESENTATIVES PRIOR TO INSTALLATION OF UNDERGROUND UTILITIES.
- NO TRENCH SHALL BE FILLED WITH BEDDING MATERIAL OR BACKFILL UNTIL THE EXCAVATION AND PIPE LAYING, RESPECTIVELY, HAVE BEEN APPROVED BY THE CITY ENGINEER'S AUTHORIZED REPRESENTATIVE.
- A WATER PRESSURE TEST IS REQUIRED OF ALL WATER LINES AND A HYDROSTATIC OR AIR TEST IS REQUIRED OF ALL SEWER LINES AND MANHOLES. TESTS ARE TO BE CONDUCTED AFTER BACKFILLING IS COMPLETE AND COMPACTED ON ALL PUBLIC AND/OR PRIVATE UNDERGROUND UTILITIES.
- WATER AND SEWER SERVICE LINES ARE TO BE MARKED AS SHOWN ON THE STANDARD SERVICE DETAILS.
- WATER LINE DISINFECTION IS TO BE ACCOMPLISHED AS OUTLINED IN ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY (ADEQ) "BULLETIN NO. 8"
- WATER PIPE CLASSIFICATION SHALL BE CLASS 305 FOR A.W.W.A. C-900 PVC AND CLASS 350 FOR DUCTILE IRON UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER. C-900 SHALL CONFORM TO CAST-IRON-EQUIVALENT OUTSIDE DIAMETER AND HAVE ELASTOMERIC GASKETS AND COUPLINGS. ALL DUCTILE IRON PIPE LINES SHALL BE POLYETHYLENE ENCASED IN ACCORDANCE WITH MAG SPECIFICATIONS.
- ALL MATERIALS THAT COME INTO CONTACT WITH DRINKING WATER SHALL CONFORM TO NSF STANDARD 61 INCLUDING, BUT NOT LIMITED TO, GASKETS, LUBRICANTS, PIPE FITTINGS, AND VALVES. (NSF-PW SEAL) (R18-4-119B).
- ALL PUBLIC SANITARY SEWER LINES AND PRIVATE SEWER SERVICE LINES WITHIN A PUBLIC UTILITY EASEMENT OR RIGHT-OF-WAY MUST BE INSPECTED PRIOR TO ACCEPTANCE BY THE CITY.
- WATER AND SEWER MAINS SHALL BE SEPARATED IN ORDER TO PROTECT PUBLIC WATER SYSTEMS FROM POSSIBLE CONTAMINATION. ALL DISTANCES ARE MEASURED PERPENDICULARLY FROM THE OUTSIDE OF THE SEWER MAIN TO THE OUTSIDE OF THE WATER MAIN. SEPARATION REQUIREMENTS ARE AS FOLLOWS:
  - A WATER MAIN SHALL NOT BE PLACED:
    - WITHIN SIX (6) FEET, HORIZONTAL DISTANCE, AND LESS THAN TWO (2) FEET, VERTICAL DISTANCE, ABOVE THE TOP OF A SEWER MAIN UNLESS EXTRA PROTECTION IS PROVIDED. EXTRA PROTECTION SHALL CONSIST OF CONSTRUCTING THE SEWER MAIN WITH MECHANICAL JOINT DUCTILE IRON PIPE OR WITH SLIP JOINT DUCTILE IRON PIPE IF JOINT RESTRAINT IS PROVIDED. ALTERNATE EXTRA PROTECTION SHALL CONSIST OF ENCASED BOTH THE WATER AND SEWER MAINS IN AT LEAST SIX (6) INCHES OF CONCRETE FOR AT LEAST TEN (10) FEET BEYOND THE AREA COVERED BY THIS SUBSECTION.
    - WITHIN TWO (2) FEET HORIZONTALLY AND TWO (2) FEET BELOW THE SEWER MAIN, WHEN A WATER MAIN IS PLACED BELOW A SEWER MAIN, EXTRA PROTECTION IS ALWAYS REQUIRED REGARDLESS OF THE VERTICAL SEPARATION.
  - NO WATER PIPE SHALL PASS THROUGH OR COME INTO CONTACT WITH ANY PART OF A SEWER MANHOLE. THE MINIMUM HORIZONTAL SEPARATION BETWEEN WATER MAINS AND MANHOLES SHALL BE SIX (6) FEET, MEASURED FROM THE CENTER OF THE MANHOLE.
  - THE MINIMUM SEPARATION BETWEEN FORCE MAINS OR PRESSURE SEWERS AND WATER MAINS SHALL BE TWO (2) FEET VERTICALLY AND SIX (6) FEET HORIZONTALLY UNDER ALL CONDITIONS, WHERE A SEWER FORCE MAIN GROSSES ABOVE OR LESS THAN SIX (6) FEET BELOW A WATER LINE, THE SEWER MAINS SHALL BE ENCASED IN AT LEAST SIX (6) INCHES OF CONCRETE OR CONSTRUCTED USING MECHANICAL JOINT DUCTILE IRON PIPE FOR TEN (10) FEET ON EITHER SIDE OF THE WATER MAIN.
  - EVEN WHEN EXTRA PROTECTION IS UTILIZED, THE MINIMUM CLEARANCE BETWEEN WATER AND SEWER SHALL BE ONE (1) FOOT.
  - THE SEPARATION REQUIREMENTS DO NOT APPLY TO BUILDING, PLUMBING, OR INDIVIDUAL HOUSE SERVICE CONNECTIONS.
- WHEN HYDROSTATIC TESTING IS PERFORMED, SEWER LINES SHALL BE TESTED FOR INFILTRATION/EXFILTRATION PER ADEQ ENGINEERING BULLETIN NO. 11. MANHOLES SHALL BE TESTED BY FILLING THE MANHOLE WITH WATER. THE APPLICANT SHALL ENSURE THAT THE DROP IN WATER LEVEL DOES NOT EXCEED ONE-THOUSANDTH (0.001) OF THE TOTAL MANHOLE VOLUME IN ONE (1) HOUR.

- WHEN AIR TESTING IS PERFORMED, SEWER LINES SHALL BE TESTED IN ACCORDANCE WITH ASTM F1417-92. MANHOLES SHALL BE TESTED IN ACCORDANCE WITH ASTM C1244.
- SEWER PIPE SHALL BE SDR 35, ASTM D3034 FOR PVC PIPE, OR CLASS 150 DIP LINED WITH PROTECTO 401 CERAMIC EPOXY OR HOPE ASTM F894. ALL DUCTILE IRON PIPELINES SHALL BE POLYETHYLENE ENCASED IN ACCORDANCE WITH MAG SPECIFICATIONS. SPECIAL DESIGN CONSIDERATIONS MAY REQUIRE A HIGHER CLASS RATING OF DIP.

- NO WATER SETTLING OF TRENCH FILL MATERIAL IS ALLOWED.
- ALL WATER AND SEWER DESIGN AND CONSTRUCTION SHALL CONFORM TO THE CURRENT ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY (ADEQ) REQUIREMENTS. WHEN ADEQ REQUIREMENTS ARE IN CONFLICT WITH THESE STANDARDS, THE MORE RESTRICTIVE SHALL APPLY.
- TRACER WIRES AND TAPES SHALL BE INSTALLED PRIOR TO TESTING THE WATER OR SEWER MAIN AS REQUIRED BY SECTION 13-09-001-0002. (STRIP WIRE 2 INCHES AT TERMINATION OF THE SERVICE).
- WATER VALVES SHALL BE ADJUSTED IN ACCORDANCE WITH CITY OF FLAGSTAFF ENGINEERING DETAIL NO. 9-03-060 AND MANHOLES SHALL BE ADJUSTED IN ACCORDANCE WITH CITY OF FLAGSTAFF DETAIL NO. 9-03-062.
- ONE HUNDRED PERCENT (100%) OF THE SEWER LINE SHALL BE TESTED FOR UNIFORM SLOPE BY REMOTE CAMERA AND TESTED FOR SHORT-TERM DEFLECTION.
  - WHEN A SEWER SERVICE IS REQUIRED TO BE ABANDONED, IT SHALL BE ABANDONED AT THE PROPERTY LINE AND CAPPED USING THE APPROPRIATE MATERIALS (PVC, CLAY, OR CONCRETE).
  - WHEN AN EXISTING WATER SERVICE IS REQUIRED TO BE ABANDONED, IT SHALL BE ABANDONED AT THE MAIN. THE SADDLE AND CORP. STOP SHALL BE REMOVED AND THE MAIN CLAMPED WITH AN APPROVED FULL CIRCLE REPAIR CLAMP.
- THE LOCATION OF WATER SERVICES SHALL BE IDENTIFIED BY BRANDING A "W" ON THE TOP OR FACE OF CURB.
- SEWER SERVICE LOCATIONS SHALL BE IDENTIFIED BY BRANDING AN "S" ON THE TOP OR FACE OF THE CURB. (ORD. 2017-22, REP&REEN, 07/05/2017)

### C.O.F. PAVING NOTES

- EXACT POINT OF MATCHING TERMINATION AND OVERLAY, IF NECESSARY, SHALL BE DETERMINED IN THE FIELD BY THE CITY ENGINEER OR HIS AUTHORIZED REPRESENTATIVE. WHEN A LONGITUDINAL JOINT ASSOCIATED WITH A TRENCH PATH, PAVEMENT MATCHUP OR OTHER OCCURS ON A STREET THAT INCLUDES A BIKE LANE, THE JOINT SHALL BE LOCATED OUTSIDE THE BIKE LANE.
  - NO JOB WILL BE CONSIDERED COMPLETE UNTIL:
    - ALL CURBS, PAVEMENTS, SIDEWALKS, CATCH BASINS, STORM DRAINS, AND MANHOLES HAVE BEEN CLEARED OF ALL DIRT AND DEBRIS;
    - SURVEY MONUMENTS ARE INSTALLED AND STAMPED; AND
    - ALL FRAMES, COVERS, AND VALVE BOXES ARE ADJUSTED TO GRADE.
  - NO PAVING CONSTRUCTION SHALL BE STARTED UNTIL ALL UTILITY LINES ARE COMPLETED AND APPROVED UNDER PROPOSED PAVED AREAS.
  - BASE COURSE WILL NOT BE PLACED UNTIL SUBGRADE HAS BEEN APPROVED BY THE CITY ENGINEER OR HIS AUTHORIZED REPRESENTATIVE.
  - THE LOCATION OF ALL WATER VALVES, FIRE HYDRANTS, AND MANHOLES MUST AT ALL TIMES DURING CONSTRUCTION BE REFERENCED AND MADE ACCESSIBLE TO THE CITY.
  - UTILITY FACILITIES IN CONFLICT WITH THIS WORK WILL BE RELOCATED BY THE PERMITTEE OR THE UTILITY OWNER. THIS ACTIVITY SHALL BE COORDINATED WITH THE OWNER OF THE UTILITY TO PREVENT ANY UNNECESSARY INTERRUPTION OF SERVICE TO EXISTING CUSTOMERS.
  - EXISTING STREET NAME SIGNS, TRAFFIC SIGNS AND DEVICES ASSOCIATED WITH THE PROJECT SHALL BE MAINTAINED DURING CONSTRUCTION AND RELOCATED BY THE CONTRACTOR AS SHOWN ON THE APPROVED PLANS.
  - ANY CHANGES OR ADDITIONS TO PAVEMENT MARKINGS CAUSED BY PAVEMENT OVERLAY, CHIP SEAL, OR INSTALLATION OF UNDERGROUND FACILITIES SHALL BE SHOWN ON THE APPROVED PLANS.
  - ON PROJECTS WHERE THE CONTRACTOR CAUSES EXCESSIVE DAMAGE TO AN EXISTING PAVED STREET OR THERE ARE MULTIPLE STREET CUTS (MAXIMUM OF FOUR (4) IN FIVE HUNDRED (500) FEET) AN ASPHALT OVERLAY SHALL BE REQUIRED.
  - A PRIME COAT IS NOT REQUIRED UNLESS SO SPECIFIED IN THE SOILS AND PAVEMENT REPORT AND/OR SHOWN ON THE PLANS.
  - ALL CURB AND GUTTER, SIDEWALK, DRIVEWAYS, AND SIDEWALK RAMPS SHALL BE CONSTRUCTED ON A MINIMUM THREE (3) INCHES OF AGGREGATE BASE COURSE (ABC). THE ABC SHALL BE CONSTRUCTED PER MAG SECTION 310, AND SHALL BE COMPACTED TO NINETY-FIVE (95%) RELATIVE DENSITY. ALL PRECAST STRUCTURES SUCH AS MANHOLE BASES, CATCH BASINS, AND BOX CULVERTS SHALL BE CONSTRUCTED ON A MINIMUM OF THREE (3) INCHES OF ABC.
  - PERMANENT PAVEMENT MARKINGS.
    - LONGITUDINAL PAVEMENT MARKINGS SHALL BE INSTALLED IN ACCORDANCE WITH SECTION 13-16-006-0001.
    - TRANSVERSE PAVEMENT MARKINGS SUCH AS STOP BARS, CROSSWALKS, ARROWS, AND LEGS SHALL BE INSTALLED IN ACCORDANCE WITH SECTION 13-16-006-0002.
  - TEMPORARY PAVEMENT MARKINGS.
    - TEMPORARY PAVEMENT MARKINGS, WHEN APPROVED, SHALL BE INSTALLED IN ACCORDANCE WITH SECTIONS 13-16-006-0001 AND 13-16-006-0002.
- NOTES:
- THE USE OF TEMPORARY MARKINGS IS STRONGLY DISCOURAGED AND MAY ONLY BE USED WITH PRIOR APPROVAL.
  - WHEN IT IS USED, THE CONTRACTOR MUST BE AVAILABLE TO RESTRIPE AS NEEDED UNTIL THE PERMANENT MARKINGS CAN BE INSTALLED.
  - WHEN IT IS IMPRACTICABLE FOR THE CONTRACTOR TO PROVIDE PERMANENT MARKINGS, THE CITY ENGINEER'S AUTHORIZED REPRESENTATIVE MAY INSTALL THE MARKINGS ON BEHALF OF THE CONTRACT PROVIDED THE FEE FOR THE WORK IS AGREED UPON AND PAID FOR IN ADVANCE.
  - THE MAXIMUM THICKNESS OF A SINGLE LIFT OF PAVEMENT SHALL BE FOUR (4) INCHES. (ORD. 2017-22, REP&REEN, 07/05/2017)
  - ALL SURVEY MONUMENTS WITHIN OR AROUND THE CONSTRUCTION AREA SHALL BE PROTECTED IN PLACE. ANY MONUMENTS THAT ARE DISTURBED OR DISPLACED BY CONSTRUCTION SHALL BE RESET BY THE RLS AT THE CONTRACTOR'S EXPENSE IN ACCORDANCE WITH CITY OF FLAGSTAFF ENGINEERING STANDARDS SECTION 13-03-005-0004 AND A.R.S. 33-103.

### C.O.F. GRADING AND DRAINAGE NOTE:

"ADEQUATE DRAINAGE, EROSION AND SEDIMENT CONTROL MEASURES, BEST MANAGEMENT PRACTICES, AND/OR OTHER STORM WATER MANAGEMENT FACILITIES SHALL BE PROVIDED AND MAINTAINED AT ALL TIMES DURING CONSTRUCTION. DAMAGES TO ADJACENT PROPERTY AND/OR THE CONSTRUCTION OF THE PROJECT CAUSED BY CONTRACTOR'S PROPERTY OR PROPERTY OWNER'S FAILURE TO PROVIDE AND MAINTAIN ADEQUATE DRAINAGE AND EROSION/SEDIMENT CONTROL FOR THE CONSTRUCTION AREA SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND/OR PROPERTY OWNER."

### C.O.F. SEEDING NOTES

TO BE APPLIED ON ALL CUT/FILL SLOPES.

THE CONTRACTOR SHALL RESEED ALL DISTURBED AREA ACCORDING TO THE PROVISIONS OF THIS SECTION. THE WORK UNDER THIS SECTION SHALL CONSIST OF FURNISHING, HAULING, PLACING, AND APPLYING EROSION CONTROL (SEED, MULCH, AND EROSION CONTROL BLANKETS) TO ALL DISTURBED AREAS WITHIN THE PROJECT AREAS AS SHOWN ON THE PLANS. REFER TO THE CITY OF FLAGSTAFF ENGINEERING STANDARDS, TITLE 13, CHAPTER 17 FOR SEEDING REQUIREMENTS.

### SHEPHARD-WESNITZER GENERAL NOTES

PROJECT SPECIFICATIONS  
ALL WORK SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING STANDARDS AND SPECIFICATIONS, AND ANY SPECIAL PROVISIONS PREPARED FOR THE PROJECT. THE TERM "CURRENT" MEANS THE DATE OF THE SPECIFICATIONS IN EFFECT AS OF THE DATE OF THE ENGINEERS SEAL ON THESE PLANS.

MARICOPA ASSOCIATION OF GOVERNMENTS (M.A.G.) UNIFORM STANDARD SPECIFICATIONS AND DETAILS FOR PUBLIC WORKS CONSTRUCTION  
CITY OF FLAGSTAFF ENGINEERING DESIGN AND CONSTRUCTION STANDARDS & SPECIFICATION  
AMERICAN WATER WORKS ASSOCIATION STANDARDS  
ARIZONA ADMINISTRATIVE CODE (AAC)  
INTERNATIONAL PLUMBING CODE (IPC)  
INTERNATIONAL BUILDING CODE (IBC)

THE GENERAL CONTRACTOR AND ALL SUBCONTRACTORS ARE REQUIRED TO OBTAIN COPIES OF THESE, AS WELL AS ANY OTHER STANDARDS OR SPECIFICATIONS REQUIRED TO SUCCESSFULLY COMPLETE THE WORK AS DESCRIBED IN THESE PLANS AND/OR ANY SPECIAL PROVISIONS PREPARED FOR THE PROJECT. THIS REQUIREMENT EXTENDS TO ANY STANDARDS, DETAILS, OR SPECIFICATIONS REFERENCED BY THE CONSTRUCTION DOCUMENTS AND NOT INCLUDED IN THE LIST ABOVE.

QUANTITY ESTIMATE AND PAYMENT PROVISIONS  
IF ANY MATERIAL QUANTITIES ARE SHOWN ON THESE PLANS, THEY ARE TO BE CONSIDERED AS APPROXIMATE ONLY AND ARE FURNISHED AS A CONVENIENCE TO THE CONTRACTOR IN EVALUATING THE MAGNITUDE OF THE PROJECT SCOPE. IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE ACTUAL QUANTITIES OF WORK REQUIRED AND BASE HIS BID ON HIS OWN INDEPENDENT ESTIMATE OF THE WORK SCOPE AND QUANTITIES OF MATERIALS REQUIRED.

THE ESTIMATED QUANTITIES MAY NOT DIRECTLY CORRESPOND TO A BID SCHEDULE/SCHEDULE OF VALUES INCLUDED IN THE CONTRACT DOCUMENTS. PAYMENT FOR ANY WORK ACCOMPLISHED SHALL BE IN ACCORDANCE WITH THE PAYMENT PROVISIONS OUTLINED IN THE CONTRACT DOCUMENTS.

UTILITY COORDINATION  
THE CONTRACTOR SHALL HAVE THE RESPONSIBILITY FOR COORDINATING ALL UTILITY RELOCATIONS, VALVE BOX/MANHOLE OR OTHER SURFACE APPURTENANCE ADJUSTMENTS, RESOLUTION OF UTILITY CONFLICTS, OBTAINING NECESSARY PERMITS, SCHEDULING BLUE STAKE, CONDUCTING EXPLORATORY EXCAVATIONS IN ADVANCE OF UTILITY INSTALLATIONS, AND GENERAL CONFORMANCE TO UTILITY AGENCY REQUIREMENTS AND SPECIFICATIONS FOR CONDUCTING THE WORK.

THE CONTRACTOR IS SPECIFICALLY ADVISED TO EXAMINE THE SITE FOR EVIDENCE OF AND CONFLICTS WITH EXISTING UTILITIES PRIOR TO SUBMITTING HIS BID. EXISTING UTILITIES HAVE BEEN SHOWN ON THE PLANS IN THEIR APPROXIMATE LOCATIONS BASED ON FIELD OBSERVATIONS AND ANY FURNISHED RECORD INFORMATION, BUT THERE IS NO GUARANTEE THAT ALL UTILITY CONFLICTS HAVE BEEN IDENTIFIED. AT THE TIME OF CONSTRUCTION, THE EXACT SIZES, TYPES, AND LOCATIONS OF EXISTING UNDERGROUND IMPROVEMENTS SHALL BE DETERMINED BY THE CONTRACTOR AND HE SHALL FURNISH MATERIALS AS NECESSARY TO CONSTRUCT THE REQUIRED CONNECTIONS.

THE CONTRACTOR SHALL PERFORM ALL NECESSARY POTHoles AND UTILITY LOCATING AT LEAST TWO WEEKS IN ADVANCE OF ALL UNDERGROUND UTILITY WORK TO ENSURE EXPEDITED COMPLETION OF THE WORK IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS. LOCATING EXISTING UTILITIES FOR THE PURPOSE OF IDENTIFYING CONFLICTS IN ADVANCE OF THE UTILITY RELOCATIONS IS AN IMPORTANT ELEMENT OF THE PROJECT. FAILURE OF THE CONTRACTOR TO LOCATE EXISTING UTILITIES AT LEAST TWO WEEKS IN ADVANCE OF THE CONSTRUCTION ACTIVITIES WILL DIMINISH HIS ABILITY TO MAKE A CLAIM FOR DELAYS FOR UTILITY RELOCATIONS.

ALL FRAMES, COVERS AND VALVE BOXES IN THE CONSTRUCTION AREA SHALL BE ADJUSTED TO FINAL FINISH GRADES, WHETHER INDICATED ON THE PLANS OR NOT. ANY NECESSARY ADJUSTMENTS WHICH ARE NOT SEPARATELY ITEMIZED IN THE BID SCHEDULE SHALL BE CONSIDERED INCIDENTAL TO THE WORK.

THE APPROPRIATE UTILITY COMPANIES SHALL BE NOTIFIED BY THE CONTRACTOR PRIOR TO ANY CONSTRUCTION. "BLUE STAKE" NUMBER IS 1-800-STAKE-IT. CONTRACTOR SHALL ALLOW TWO WORKING DAYS AFTER "BLUE STAKE" IS NOTIFIED, BEFORE COMMENCING ANY EXCAVATION WORK IN PROXIMITY OF BURIED UTILITIES.

AT LEAST TWO WORKING DAYS PRIOR NOTICE IS REQUIRED BEFORE DISRUPTING EXISTING UTILITY SERVICES TO MAKE CONNECTIONS. THE NOTICE MUST INCLUDE THE EXACT TIME OF THE DISRUPTION OF SERVICE AND THE EXPECTED DURATION OF THE LOSS OF SERVICE. THE NOTICE SHALL BE FURNISHED TO THE OWNER OR OTHERS AS SPECIFIED IN THE CONTRACT DOCUMENTS.

THE LOCATION OF ALL WATER VALVES MUST AT ALL TIMES DURING CONSTRUCTION BE REFERENCED AND MADE AVAILABLE TO THE GOVERNING WATER COMPANY/DEPARTMENT.

ALL WATER LINES SHALL BE PRESSURE AND LEAKAGE TESTED PER AWA C605-13 OR MAG STANDARDS SECTION 611.

### PERMITS

CITY OF FLAGSTAFF PERMITS  
A PUBLIC IMPROVEMENTS PERMIT, A FLOODPLAIN USE PERMIT, AND A GRADING PERMIT ARE REQUIRED FOR THIS PROJECT. CONTACT COMMUNITY DEVELOPMENT AT 928-213-2606 TO INITIATE THE PROCESS. CONTACT THE ENGINEERING INSPECTION DEPARTMENT AND STORM WATER DEPARTMENT AT LEAST 72 HOURS PRIOR TO COMMENCEMENT OF THE PROJECT TO COORDINATE INSPECTIONS. GRADING CERTIFICATION IS REQUIRED, WHICH SHALL BE SEALED BY THE SURVEYOR AND GEOTECHNICAL ENGINEER; SPECIAL INSPECTION CERTIFICATION FOR ANY BUILT-IN PLACE STRUCTURES WILL ALSO BE REQUIRED. AS-BUILTS ARE REQUIRED WITH THE CERTIFICATION.

A PRE-CONSTRUCTION MEETING WITH THE CITY OF FLAGSTAFF IS REQUIRED PRIOR TO THE START OF ANY WORK. CONTACT THE CITY OF FLAGSTAFF PROJECT MANAGER TO SCHEDULE THE MEETING.

### EARTHWORK SUMMARY

#### SITE GRADING:

UNADJUSTED CUT: 805 CY  
UNADJUSTED FILL: 50 CY

EARTHWORK VOLUMES SHOWN ABOVE ARE BASED ON IN-PLACE VOLUMES REQUIRED FOR SITE GRADING. QUANTITIES ARE NOT ADJUSTED FOR SHRINKAGE (SEE GEOTECH REPORT FOR ESTIMATED SHRINKAGE FACTORS). THESE RESULTS MAY NOT REFLECT THE FINAL CONSTRUCTED QUANTITIES. THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN QUANTITY DETERMINATIONS. ADDITIONAL EARTHWORK QUANTITIES SHALL BE CONSIDERED INCIDENTAL TO BUILDING CONSTRUCTION, ANY WASTE MATERIAL SHALL BE INCIDENTAL TO CONSTRUCTION.

### CONSTRUCTION QUANTITIES

Keynote	Quantity	Unit	Item Description
DEMOLITION			
101	58	LF	SAWCUT EXISTING AC PAVEMENT (MIN 2") PER M.A.G. SPECS. 336 & 350.
102	222	SY	REMOVE AND DISPOSE OF EXISTING AC PAVEMENT PER M.A.G. SPECS. 336 & 350.
103	115	LF	REMOVE AND DISPOSE OF EXISTING CONCRETE CURB AND GUTTER PER M.A.G. SPECS. 336 & 350.
104	407	SF	REMOVE AND DISPOSE OF EXISTING CONCRETE SIDEWALK PER M.A.G. SPECS. 336 & 350. SIDEWALK SHALL BE REMOVED TO NEAREST JOINT.
105	1,677	SF	REMOVE AND DISPOSE OF EXISTING CONCRETE PER M.A.G. SPECS. 336 & 350.
109	105	SF	REMOVE AND DISPOSE OF EXISTING CONCRETE DRIVEWAY PER M.A.G. SPECS. 336 & 350.
116	57	LF	REMOVE AND DISPOSE OF EXISTING 6" POLYVINYL CHLORIDE (PVC) WATERLINE PER M.A.G. SPECS. 336 & 350.
135	1	EA	REMOVE AND DISPOSE OF EXISTING CONCRETE HEADWALL PER M.A.G. SPECS. 336 & 350.
136	173	LF	REMOVE AND SALVAGE EXISTING 60" STORM DRAIN PIPE, PER M.A.G. SPECS. 336 & 350.
137	1,270	SF	REMOVE AND DISPOSE OF EXISTING GROUTED RIPRAP PER M.A.G. SPECS. 336 & 350.
143		NPI	CONTRACTOR AND UNISOURCE TO COORDINATE REMOVAL AND REPLACEMENT OF EXISTING GAS METERS, IF APPLICABLE PROTECT EXISTING GAS METER IN PLACE.
144		NPI	CONTRACTOR AND UNISOURCE TO COORDINATE REMOVAL AND RELOCATION OF EXISTING GAS LINE AND APPURTENANCES. CONTRACTOR TO PROTECT ALL EXISTING SERVICES IN PLACE IF APPLICABLE.
145		NPI	CONTRACTOR TO PROTECT IN PLACE EXISTING TELECOMMUNICATIONS LINE AND APPURTENANCES.
147		NPI	CONTRACTOR TO PROTECT IN PLACE EXISTING OVERHEAD ELECTRIC LINE AND APPURTENANCES. COORDINATE POLE SUPPORT WITH APS DURING CONSTRUCTION AS NEEDED.
148	88	LF	REMOVE AND REPLACE EXISTING PRIVATE FENCE PER M.A.G. SPECS. 336 & 350.
150	5	EA	REMOVE AND DISPOSE OF EXISTING TREE AND ROOTBALL PER M.A.G. SPECS. 336 & 350. CONTRACTOR TO REMOVE TREES FROM SITE THE SAME DAY THEY ARE DOWNED.
153	1	EA	CONTRACTOR TO REMOVE AND REINSTALL EXISTING PRIVATE MAILBOX PER M.A.G. SPECS. 336 & 350. COORDINATE WITH CITY AND OWNER FOR REINSTALLATION.
198		NPI	PROTECT EXISTING FENCE IN PLACE
199		NPI	PROTECT EXISTING TREE IN PLACE.
PAVING AND STORMWATER			
200	129	SY	CONSTRUCT PAVEMENT STRUCTURAL SECTION PER DETAIL 3 ON SHEET DT01.
203	2,216	SF	CONSTRUCT SHOTCRETE STRUCTURAL SECTION PER DETAIL 5 ON SHEET DT01.
204	80	SF	CONSTRUCT DRIVEWAY PER MAG STD DTL 250-1 AND MATCH EXISTING 24' DRIVEWAY.
220	47	LF	CONSTRUCT VERTICAL CURB AND GUTTER PER DETAIL 2 ON SHEET DT01.
221	33	LF	CONSTRUCT MONOLITHIC CURB AND GUTTER PER PROFILE ON SHEET IPO1.
227	118	LF	CONSTRUCT SAFETY RAIL PER M.A.G. STD. DTL. 145. MODIFIED VERTICAL BAR SPACE 4" ON CENTER AND PER SHEET IPO2.
230	357	SF	CONSTRUCT CONCRETE SIDEWALK PER DETAIL 4 ON SHEET DT01, SIDEWALK WIDTH TO MATCH EXISTING.
270	3	EA	CONSTRUCT CONCRETE HEADWALL PER M.A.G. STD. DTL. 501-3 AND MODIFIED AS SHOWN ON SHEET IPO2. CONTRACTOR TO REFER TO GEOTECH REPORT FOR SUBGRADE AND FOUNDATION PREPARATION.
281	1	EA	INSTALL TRASH RACK PER M.A.G. STD. DTL. 502-1 AND 502-2. MODIFIED WITH 2" BARS AND SPACED 18" ON CENTER.
282	1	EA	INSTALL TRASH RACK PER M.A.G. STD. DTL. 502-2 AND DETAIL "D" ON SHEET IPO2.
283	1	EA	CONSTRUCT DROP INLET PER M.A.G. STD. DTL. 501-5.
301	57	LF	INSTALL 20" RECLAIM WATERLINE (DIP CLASS 350 - RESTRAINED) INCLUDING ALL APPURTENANCES PER M.A.G. SPEC. SECTION 601 AND 610 AND AS MODIFIED IN THE C.O.F. REVISIONS TO M.A.G. SECTION 13-21-001-0601. INSTALL TRACER WIRE ALONG WATERLINE PER C.O.F. STD. DTL. 9-01-020 ON SHEET DT01 AND C.O.F. SECTION 13-09-001-0002. TRENCH EXCAVATION, BACKFILLING AND COMPACTION PER C.O.F. STD. DTLS. 9-01-030, 9-01-031, AND 9-01-032 ON SHEET DT01.
307	1	EA	CONSTRUCT 20" DIP CLASS 350 RESTRAINED WATER MAIN VERTICAL REALIGNMENT COMPLETE AND IN PLACE SIMILAR TO MAG STD DTL 370 WITH 4-45-DEGREE BENDS. ALL BENDS SHALL BE RESTRAINED PER MAG SPEC 610, 750, MAG STD DTL 303, AND AS MODIFIED PER COF ADDENDUMS TO MAG. DEFLECT WATERLINE TO PROVIDE 2' MIN. VERTICAL SEPARATION FROM OTHER EXISTING OR PROPOSED UTILITIES.
311	1	EA	INSTALL 2" AIR RELEASE VALVE PER C.O.F. STD. DTL. 9-03-100.
312	2	EA	INSTALL 20" GATE VALVE DIP CLASS 250, EPOXY-COATED RESILIENT SEAT (INCLUDING VALVE BOX AND COVER) PER M.A.G. STD. DTL. 340 AND M.A.G. SPEC 610. ADJUST BOX TO FINISH GRADE PER C.O.F. STD. DTLS. 9-03-060 AND 9-03-062 ON SHEET DT01. THRUST BLOCK PER M.A.G. STD. DTL. 301 AND AS MODIFIED BY C.O.F. REVISIONS TO M.A.G. SECTION 13-21-002-0380.
500	215	LF	INSTALL 12'X8" CONCRETE BOX CULVERT PER ADOT STD. DTL. SD 601.01.
580	324	SF	INSTALL D50=6" RIPRAP EROSION PROTECTION PLACED MIN. 12" THICK OVER MIRAFI 140N FILTER FABRIC PER DETAIL 6 ON SHEET DT01.
581	891	SF	INSTALL GROUTED RIPRAP PER DETAIL 6 AND 7 ON SHEET DT01.
601	141	LF	INSTALL 6" SOLID WHITE BIKE LANE STRIPING PER C.O.F. STD. DTL. 16-06-010.
607	56	LF	INSTALL 4" DOUBLE YELLOW CENTERLINE STRIPING PER C.O.F. STD. DTL. 16-06-010. HORIZONTAL PLACEMENT AS SHOWN ON PLANS.
701	56	LF	INSTALL 4-3" SCHEDULE 80 PVC CONDUIT (FIBER OPTIC) PER C.O.F. STD. DTL. 9-01-010 ON SHEET DT01 AND PER C.O.F. STANDARDS AND SPECIFICATIONS.
GRADING AND DRAINAGE			
203	402	SF	CONSTRUCT SHOTCRETE STRUCTURAL SECTION PER DETAIL 5 ON SHEET DT01.
260	1	LS	CONSTRUCT CUT SLOPE (2' HORIZONTAL TO 1' VERTICAL) TO DAYLIGHT.
263	1	LS	CONSTRUCT CUT SLOPE (4' HORIZONTAL TO 1' VERTICAL) TO DAYLIGHT.
275	8,466	SF	CONSTRUCT SHOTCRETE CHANNEL PER TYPICAL DETAIL 1 ON SHEET DT01.

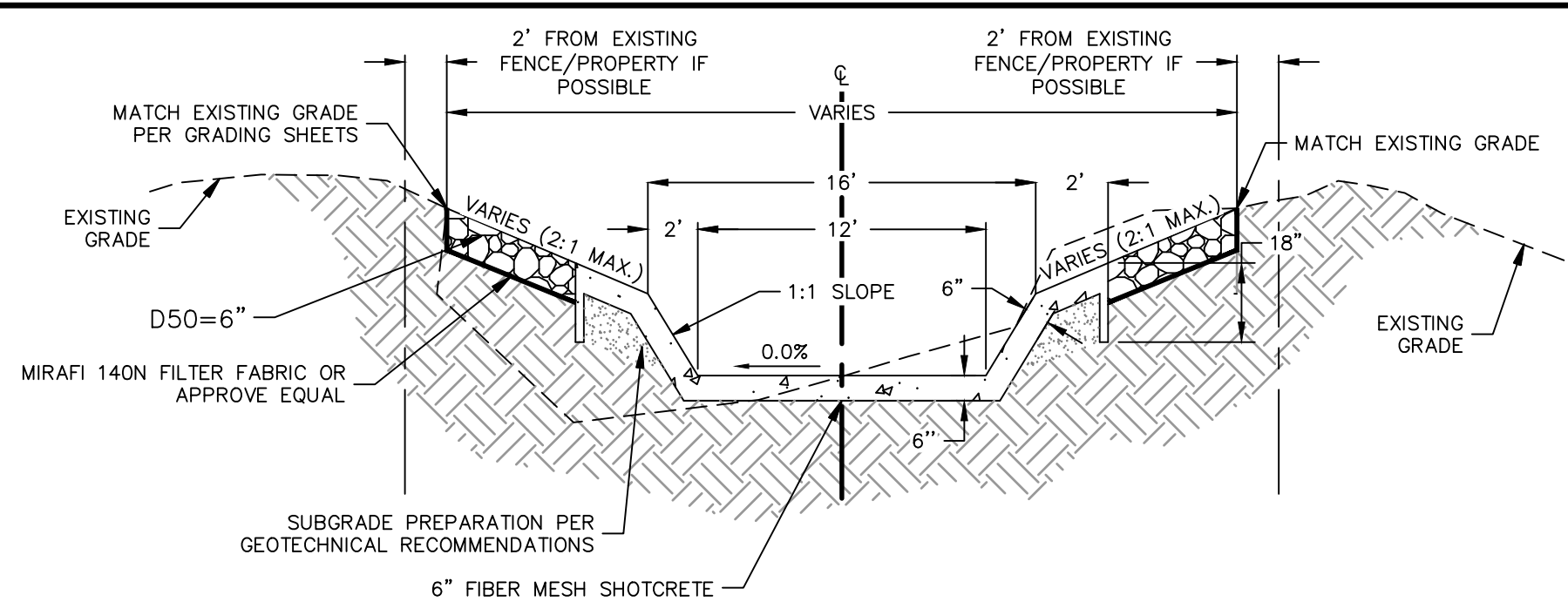
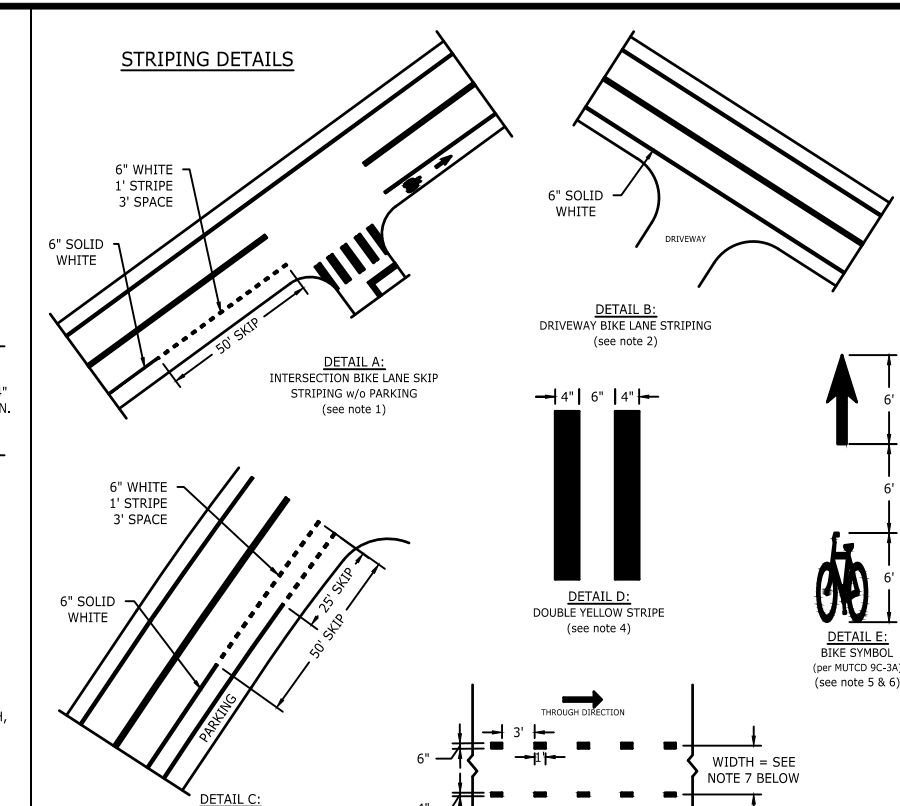
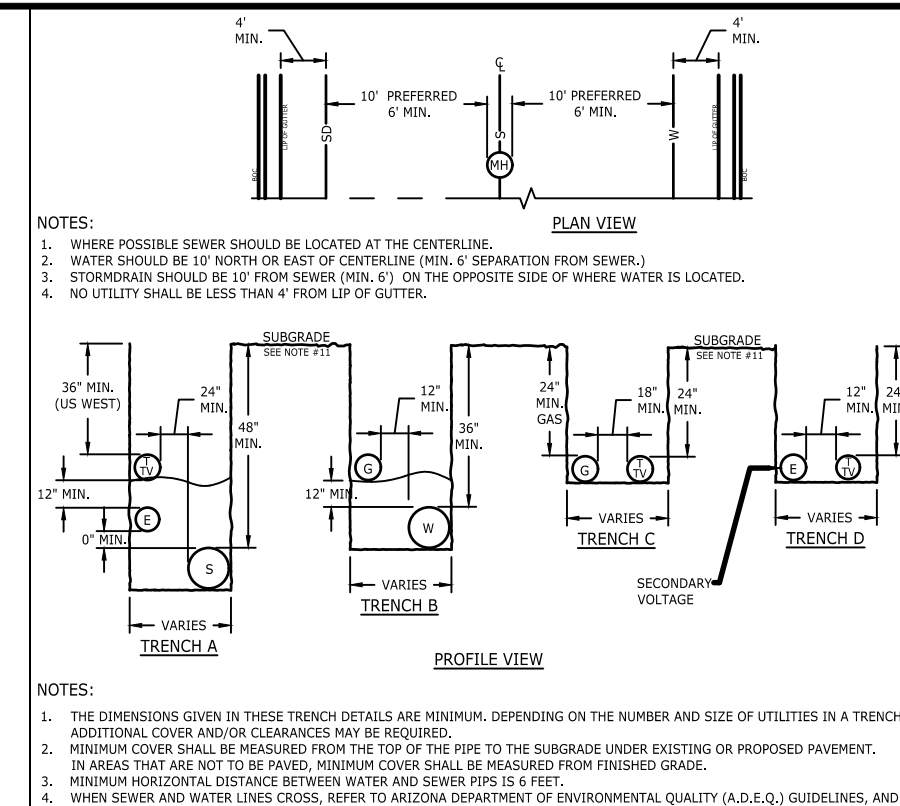
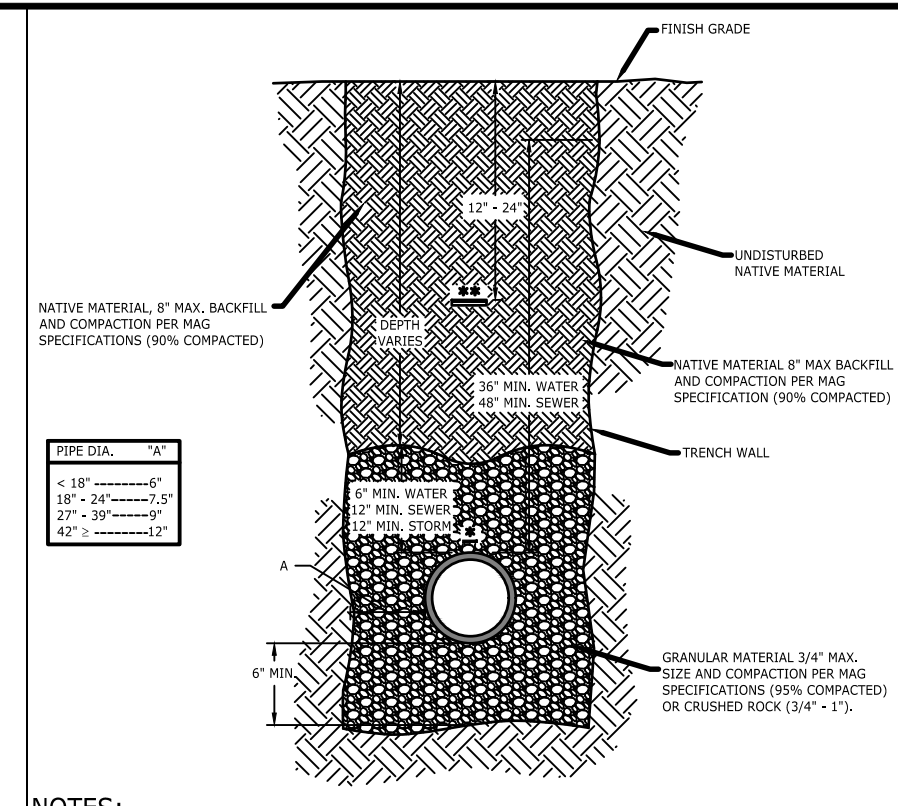
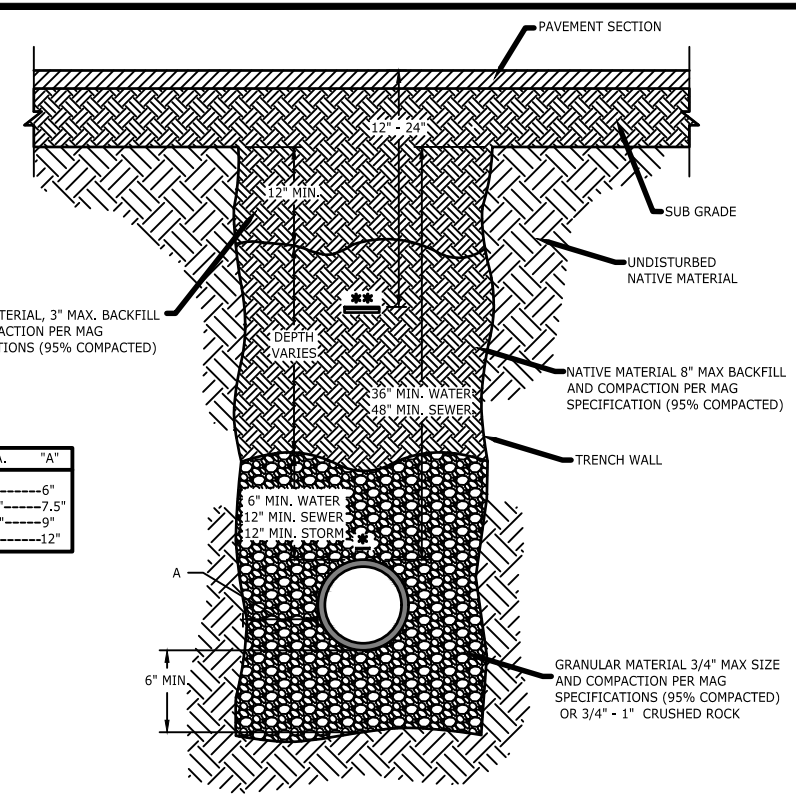
## CITY OF FLAGSTAFF APPROVAL STAMP



NOT FOR CONSTRUCTION, BIDDING OR RECORDING

FLAGSTAFF ARIZONA		SPRUCE AVE. WASH IMPROVEMENTS		JOB NO.: 20285		110 W. Dols Avenue Flagstaff, AZ 86001		DATE: MAR 22		REVISIONS	
GENERAL NOTES		20285		MAR 22		928.774.8934 fax		AS SHOWN		BY	
		HAS		SCALE:		www.swiwoz.com		DRAWN:		DATE	
		KMF		DESIGN:				CHECKED:		NO. DESCRIPTION	
		BD								SHT NO. OF	
										C.O.F. #PZ-21-00259	
										2 13	

Call at least two full working days before you begin excavation.  
ARIZONA811  
Arizona Blue Stake, Inc.  
808 84-141 or 1-800-STAKE-IT (928-5348)

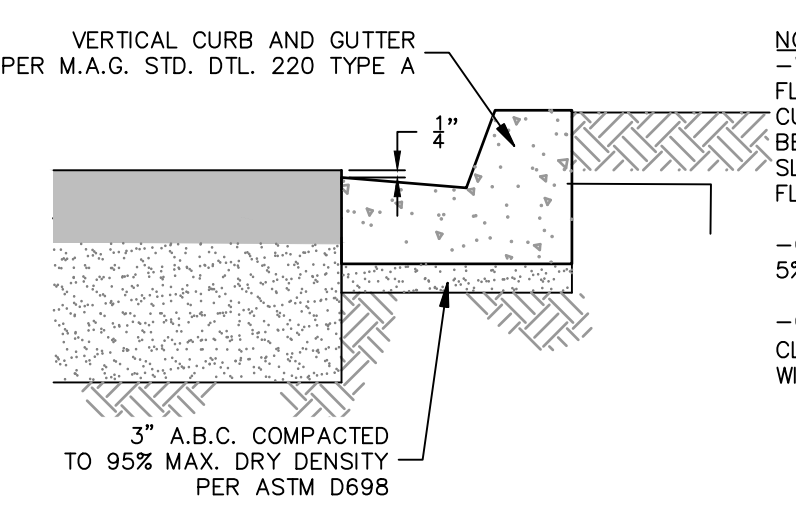


RIPRAP GRADATION TABLE

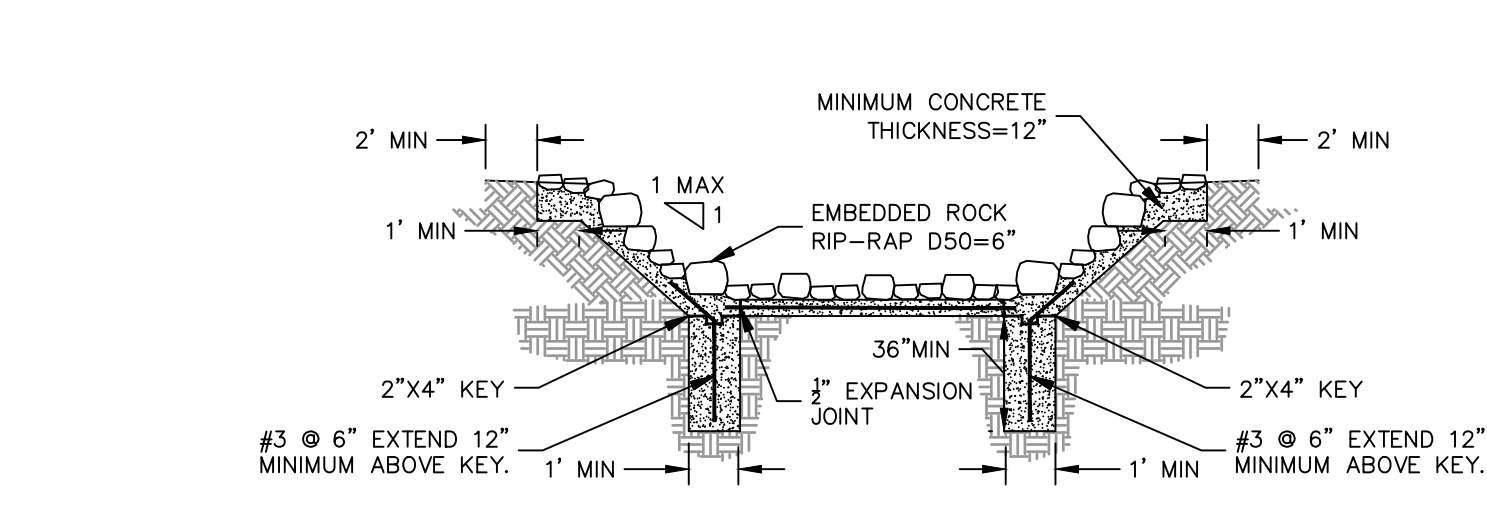
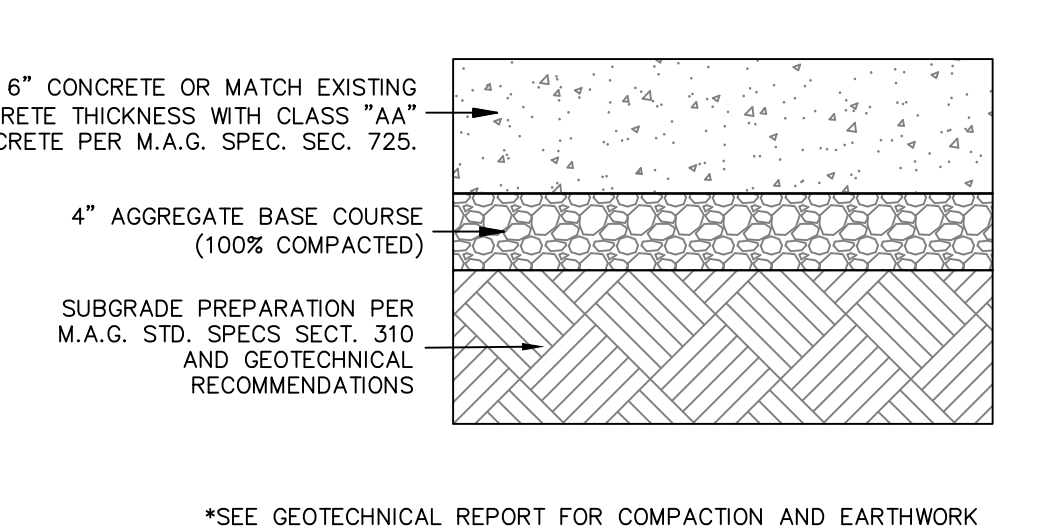
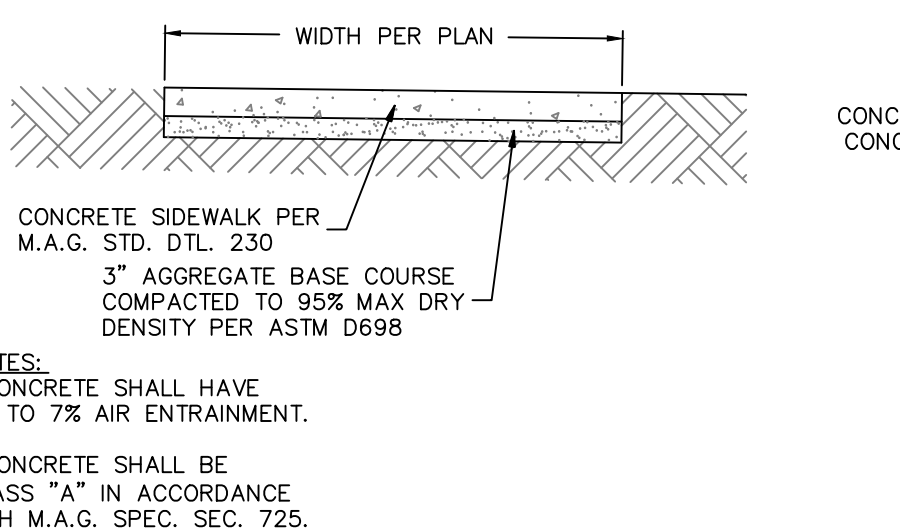
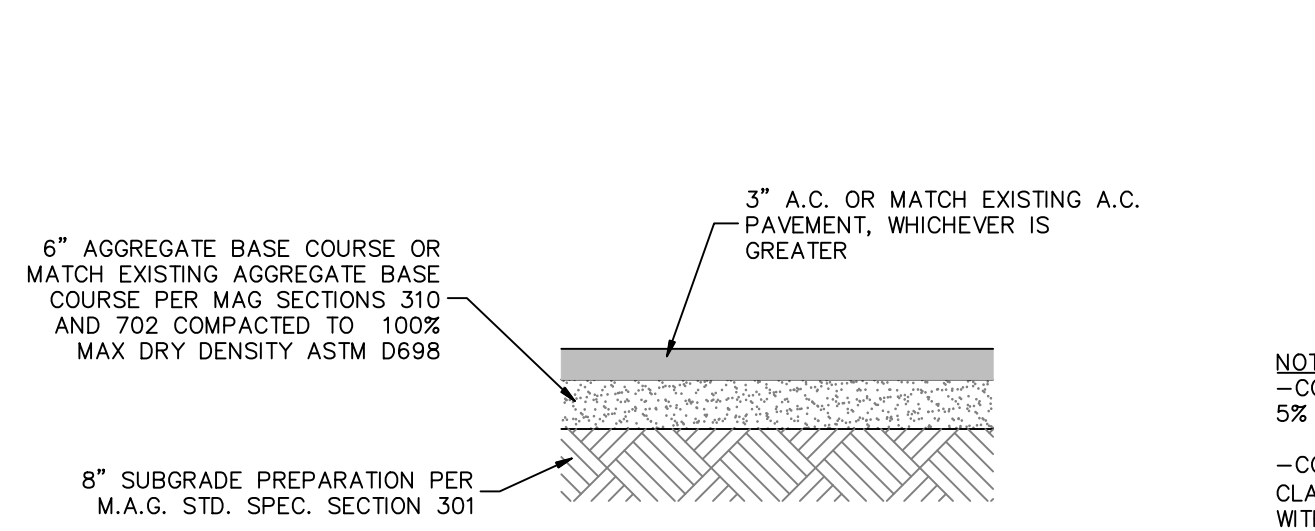
PERCENT PASSING	SIZE	6	9	12	18	24
100 to 90	2.0 D-50	12	18	24	36	48
85 to 70	1.5 D-50	9	14	18	27	36
50 to 30	1.0 D-50	6	9	12	18	24
15 to 5	0.67 D-50	4	6	8	12	16
5 to 0	0.33 D-50	2	3	4	6	8

RIPRAP - RIPRAP SHALL HAVE A BULK SPECIFIC GRAVITY OF 2.4 OR GREATER (PER ASTM C127) AND ALL ROCK SHALL BE ANGULAR. RIPRAP SHALL BE BETWEEN 3-INCHES AND 12-INCHES IN DIAMETER, WITH 50% (BY WEIGHT) LARGER THAN 6-INCHES IN DIAMETER UNLESS OTHERWISE SPECIFIED BY THE CITY ENGINEER.

SHOTCRETE CHANNEL DETAIL 1 NO SCALE DT01



NOTES:  
-WHERE DRAINAGE IS TO FLOW AWAY FROM THE CURB, THE GUTTER SHALL BE CONSTRUCTED TO SLOPE AWAY FROM THE FLOWLINE.  
-CONCRETE SHALL HAVE 5% TO 7% AIR ENTRAINMENT.  
-CONCRETE SHALL BE CLASS "A" IN ACCORDANCE WITH M.A.G. SPEC. SEC. 725.



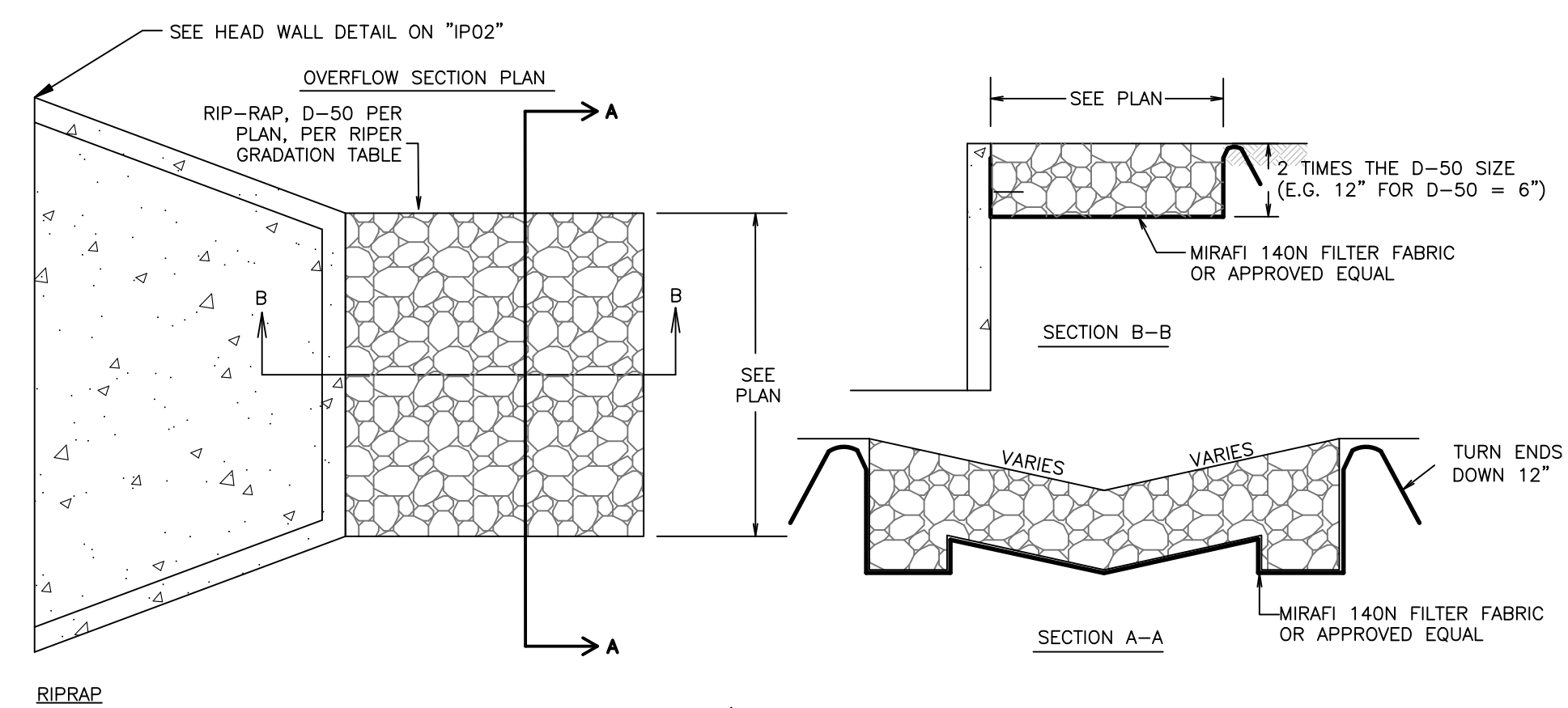
VERTICAL CURB & GUTTER 2 NO SCALE DT01

PAVEMENT STRUCTURAL SECTION 3 NO SCALE DT01

SIDEWALK 4 NO SCALE DT01

CONCRETE PAVEMENT SECTION 5 NO SCALE DT01

GROUTED RIPRAP DETAIL 6 NO SCALE DT01



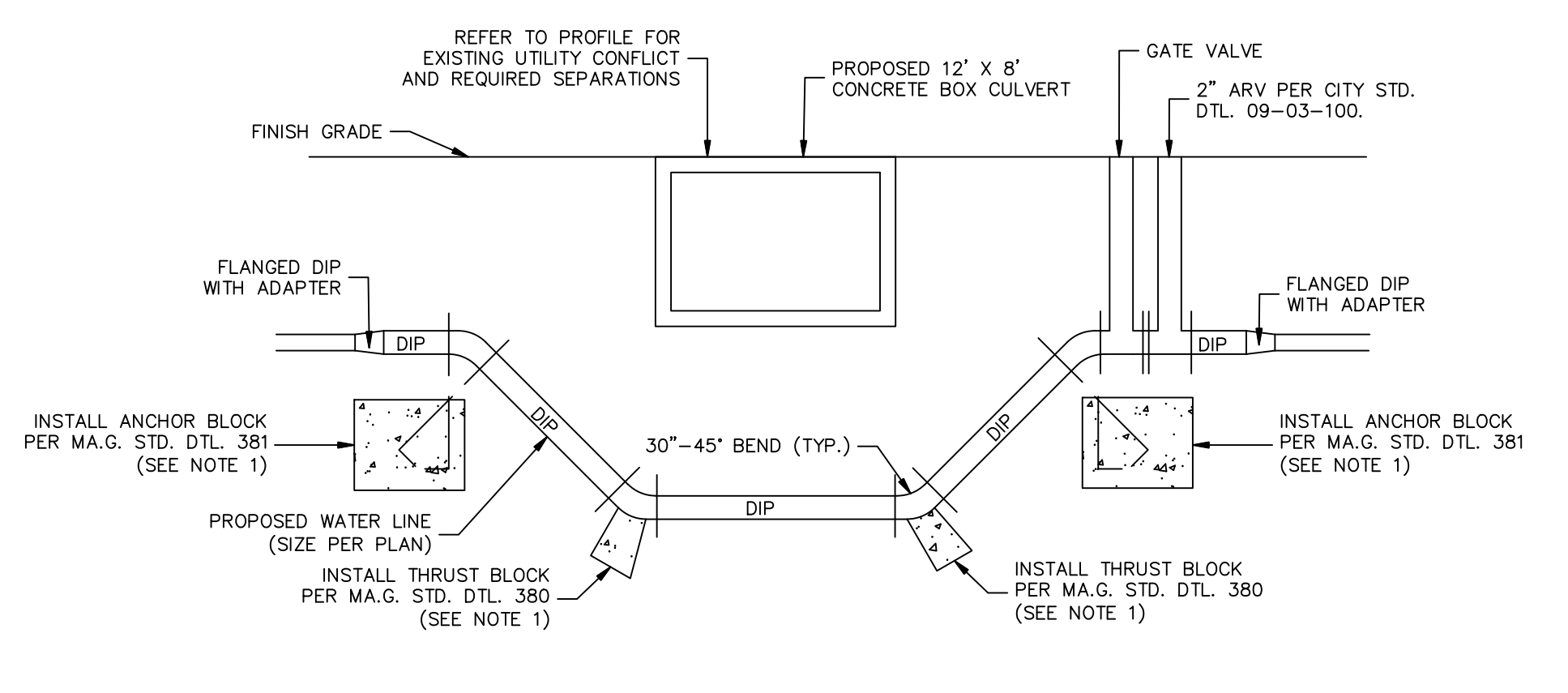
RIPRAP GRADATION TABLE

PERCENT PASSING	SIZE	6	9	12	18	24
100 to 90	2.0 D-50	12	18	24	36	48
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5 to 0	0.33 D-50	2	3	4	6	8

RIPRAP - RIPRAP SHALL HAVE A BULK SPECIFIC GRAVITY OF 2.4 OR GREATER (PER ASTM C127) AND ALL ROCK SHALL BE ANGULAR. RIPRAP SHALL BE BETWEEN 3-INCHES AND 12-INCHES IN DIAMETER, WITH 50% (BY WEIGHT) LARGER THAN 6-INCHES IN DIAMETER UNLESS OTHERWISE SPECIFIED BY THE CITY ENGINEER.

WIRE-TIED ROCK MATRESS - MATRESS SHOULD BE DIVIDED INTO COMPARTMENTS SO THAT FAILURE OF ONE SECTION OF THE MATRESS WILL NOT CAUSE LOSS OF THE ENTIRE MATRESS. -INSTALL DIAPHRAGMS AT A NOMINAL 2 FOOT SPACING WITHIN EACH OF THE COMPARTMENTS TO PROVIDE THE RECOMMENDED COMPARTMENTALIZATION. -MAXIMUM SIZE OF STONE SHOULD NOT EXCEED THE THICKNESS OF INDIVIDUAL MATRESS UNITS OR SMALLER THAN THE WIRE-MESH OPENING. ROCK SIZE SHALL BE D50=12" PLACED AT 24" THICK.

RIPRAP INSTALLATION DETAIL 7 NO SCALE DT01



NOTES:  
1. ALL BENDS SHALL BE RESTRAINED WITH THRUST BLOCKS PER M.A.G. DTLS. 380 AND 381 AND AS MODIFIED PER C.O.F. ADDENDUM 1 TO M.A.G. SECTION 13-21-002.  
2. INSTALL CLASS 250 FLANGED DUCTILE IRON PIPE WITH ADAPTER.  
3. SIZE WILL VARY BETWEEN EXISTING RECLAIMED WATERLINE AND THE EXISTING WATERLINE.

VERTICAL WATER REALIGNMENT 8 NO SCALE DT01

CITY OF FLAGSTAFF APPROVAL STAMP

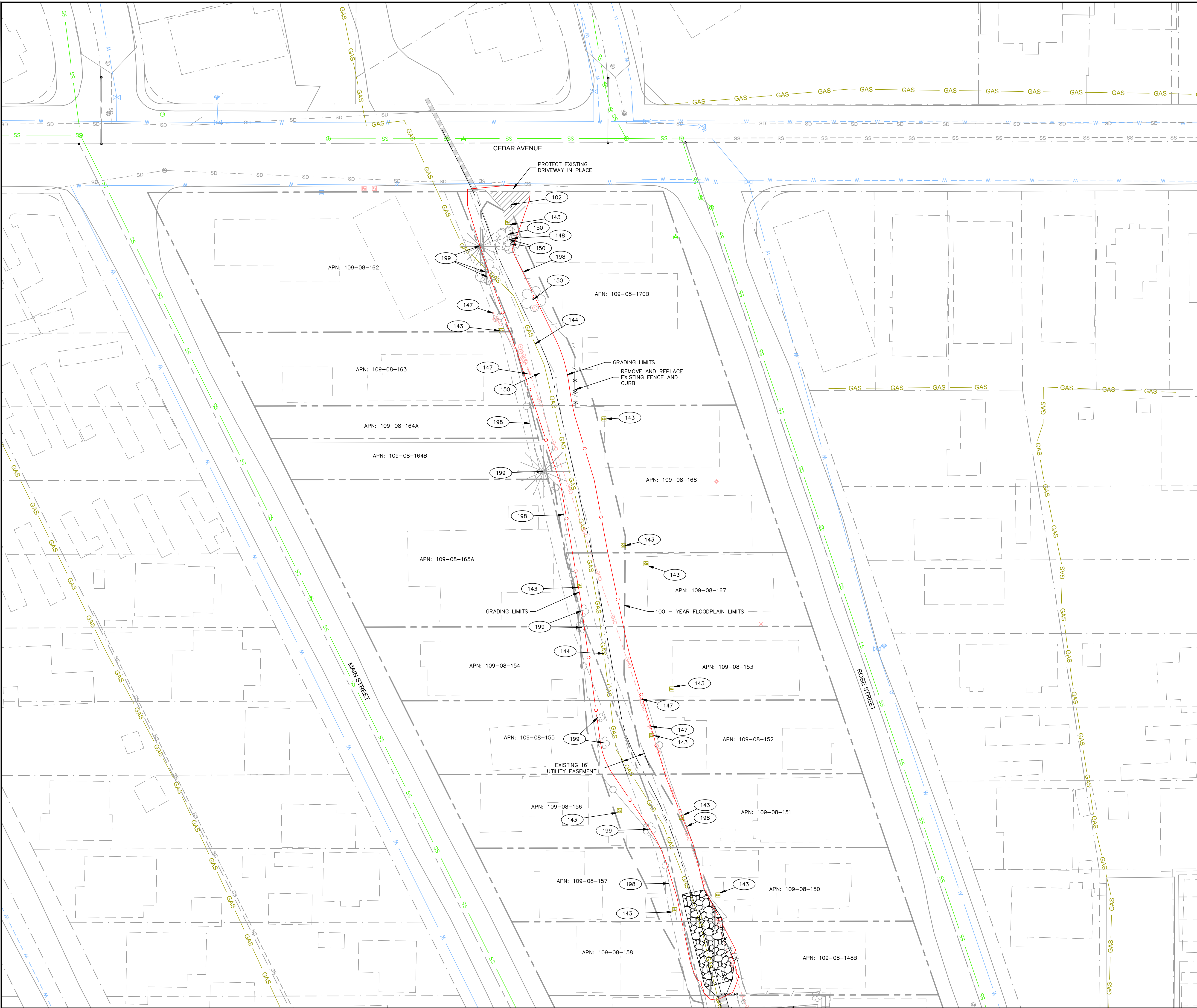
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C.O.F. #PZ-21-00259



PLOTTED: Mar 08, 2022--4:23pm

FILE: P:\2020\20285 DRAWINGS\CONSTRUCTION PLANS\20285 - SURVEY CONTROL & DEMOLITION SHEETING.HERKSSON



CONSTRUCTION NOTES

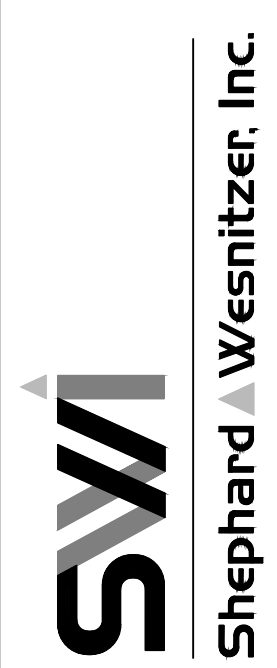
- 102 40 SY REMOVE AND DISPOSE OF EXISTING AC PAVEMENT PER M.A.G. SPECS. 336 & 350.
- 143 NPI CONTRACTOR AND UNISOURCE TO COORDINATE REMOVAL AND REPLACEMENT OF EXISTING GAS METERS. IF APPLICABLE PROTECT EXISTING GAS METER IN PLACE.
- 144 NPI CONTRACTOR AND UNISOURCE TO COORDINATE REMOVAL AND RELOCATION OF EXISTING GAS LINE AND APPURTENANCES. CONTRACTOR TO PROTECT ALL EXISTING SERVICES IN PLACE IF APPLICABLE.
- 145 NPI CONTRACTOR TO PROTECT IN PLACE EXISTING TELECOMMUNICATIONS LINE AND APPURTENANCES.
- 147 NPI CONTRACTOR TO PROTECT IN PLACE EXISTING OVERHEAD ELECTRIC LINE AND APPURTENANCES. COORDINATE POLE SUPPORT WITH APS DURING CONSTRUCTION AS NEEDED.
- 148 11 LF REMOVE AND REPLACE EXISTING PRIVATE FENCE PER M.A.G. SPECS. 336 & 350.
- 150 5 EA REMOVE AND DISPOSE OF EXISTING TREE AND ROOTBALL PER M.A.G. SPECS. 336 & 350. CONTRACTOR TO REMOVE TREES FROM SITE THE SAME DAY THEY ARE DOWNED.
- 198 NPI PROTECT EXISTING FENCE IN PLACE
- 199 NPI PROTECT EXISTING TREE IN PLACE.

FLAGSTAFF ARIZONA

SPRUCE AVE. WASH IMPROVEMENTS

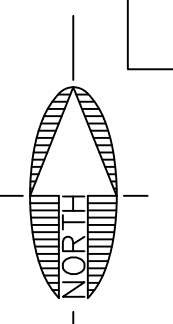
JOB NO:	20285
DATE:	MAR 22
SCALE:	AS SHOWN
DRAWN:	HAS
DESIGN:	KMF
CHECKED:	BD

110 W. Dole Avenue  
Flagstaff, AZ 86001  
928.774.8354  
928.774.8334 fax  
www.swi.coz.com



NO.	DESCRIPTION	DATE	BY

CITY OF FLAGSTAFF APPROVAL STAMP



SCALE 1" = 30'



PRELIMINARY  
NOT FOR CONSTRUCTION,  
BIDDING OR RECORDING

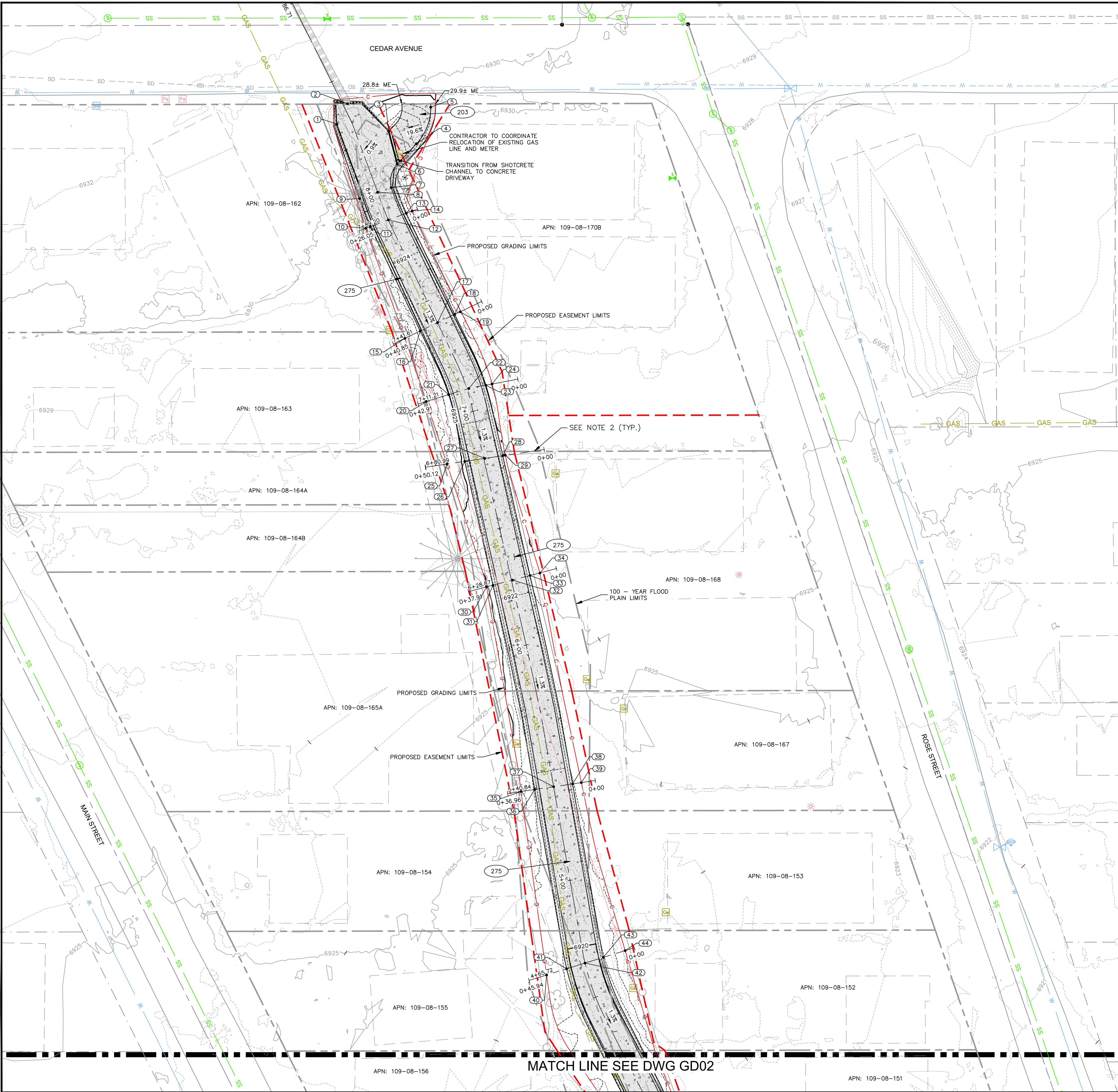
C.O.F. #PZ-21-00259

DRAWING NO. SV02  
SHT NO. 5 OF 13

Call at least two full working days before you begin excavation.  
ARIZONA 801  
Arizona Blue Stakes, Inc.  
088 84-11 or 1-800-514-1111 (AZ-5348)

PLOTTED: Mar 08, 2022 - 4:23pm

FILE: P:\2020\20285 DRAWINGS\CONSTRUCTION PLANS\20285 - GRADING AND DRAINAGE PLAN.DWG ERIKSSON



POINT TABLE					
POINT #	STA/OFFSET	ELEVATION	NORTHING	EASTING	DESCRIPTION
1	STA: 8+33.13, 5.92' L	6924.65	79339.0370	79339.0370	BOTTOM OF WALL
2	STA: 8+38.86, 1.84' R	6925.00	79347.6325	79347.6325	EXISTING INVERT
3	STA: 8+22.28, 13.13' R	6924.75	79336.1217	79336.1217	BOTTOM OF WALL
4	STA: 8+13.38, 22.19' R	6927.23	79330.8992	79330.8992	ACCESS RAMP
5	STA: 8+25.65, 33.07' R	6929.37	79346.1664	79346.1664	ACCESS RAMP
6	STA: 8+08.21, 11.77' R	6924.75	79322.4488	79322.4488	ACCESS RAMP
7	STA: 7+99.85, 6.00' R	6924.40	79312.6155	79312.6155	BOTTOM OF CHANNEL
8	STA: 8+00.00, 0.00'	6924.40	79310.6820	79310.6820	BOTTOM OF CHANNEL
9	STA: 8+00.08, 7.94' L	6926.35	79308.0109	79308.0109	BOTTOM OF CHANNEL
10	STA: 7+88.17, 10.01' L	6928.68	79295.6354	79295.6354	TOP OF SLOPE
11	STA: 7+88.06, 8.00' L	6926.27	79296.3361	79296.3361	TOP OF CONC CHANNEL
12	STA: 7+87.61, 0.00'	6924.23	79299.1285	79299.1285	BOTTOM OF CONC CHANNEL
13	STA: 7+87.07, 8.00' R	6926.21	79301.9217	79301.9217	TOP OF CONC CHANNEL
14	STA: 7+86.88, 10.54' R	6927.74	79302.8092	79302.8092	TOP OF SLOPE
15	STA: 7+40.02, 15.11' L	6927.60	79249.6651	79249.6651	TOP OF SLOPE
16	STA: 7+40.02, 8.00' L	6925.60	79252.7462	79252.7462	TOP OF CONC CHANNEL
17	STA: 7+40.02, 0.00'	6923.60	79256.2109	79256.2109	BOTTOM OF CONC CHANNEL
18	STA: 7+40.03, 8.00' R	6925.60	79259.6757	79259.6757	TOP OF CONC CHANNEL
19	STA: 7+40.00, 10.55' R	6925.71	79260.7549	79260.7549	TOP OF SLOPE
20	STA: 7+10.06, 17.74' L	6928.42	79223.3237	79223.3237	TOP OF SLOPE
21	STA: 7+09.85, 8.00' L	6925.19	79226.1798	79226.1798	TOP OF CONC CHANNEL
22	STA: 7+09.69, 0.81' R	6923.19	79228.7618	79228.7618	BOTTOM OF CONC CHANNEL
23	STA: 7+08.84, 8.00' R	6925.18	79230.1095	79230.1095	TOP OF CONC CHANNEL
24	STA: 7+08.56, 10.61' R	6926.08	79230.5979	79230.5979	TOP OF SLOPE
25	STA: 6+80.99, 15.48' L	6925.98	79197.1970	79197.1970	TOP OF SLOPE
26	STA: 6+80.42, 8.00' L	6924.80	79198.3036	79198.3036	TOP OF CONC CHANNEL
27	STA: 6+79.79, 0.42' R	6922.79	79199.5492	79199.5492	BOTTOM OF CONC CHANNEL
28	STA: 6+79.22, 8.00' R	6924.78	79200.6712	79200.6712	TOP OF CONC CHANNEL
29	STA: 6+79.20, 9.05' R	6924.81	79200.8866	79200.8866	TOP OF SLOPE
30	STA: 6+27.32, 10.76' L	6925.28	79145.9113	79145.9113	TOP OF SLOPE
31	STA: 6+27.32, 8.00' L	6924.08	79146.5220	79146.5220	TOP OF CONC CHANNEL
32	STA: 6+27.69, 0.43' R	6922.09	79148.7494	79148.7494	BOTTOM OF CONC CHANNEL
33	STA: 6+27.94, 8.00' R	6924.09	79150.6685	79150.6685	TOP OF CONC CHANNEL
34	STA: 6+28.00, 12.26' R	6924.25	79151.6729	79151.6729	TOP OF SLOPE
35	STA: 5+40.09, 13.76' L	6924.07	79060.4642	79060.4642	TOP OF SLOPE
36	STA: 5+39.93, 8.00' L	6922.91	79061.3072	79061.3072	TOP OF CONC CHANNEL
37	STA: 5+39.72, 0.00'	6920.91	79062.4786	79062.4786	BOTTOM OF CONC CHANNEL
38	STA: 5+39.50, 8.00' R	6922.91	79063.6500	79063.6500	TOP OF CONC CHANNEL
39	STA: 5+39.40, 11.70' R	6923.72	79064.1916	79064.1916	TOP OF SLOPE
40	STA: 4+63.87, 16.75' L	6922.63	78983.8677	78983.8677	TOP OF SLOPE
41	STA: 4+64.38, 8.00' L	6921.90	78986.4650	78986.4650	TOP OF CONC CHANNEL
42	STA: 4+64.92, 0.00'	6919.90	78988.8412	78988.8412	BOTTOM OF CONC CHANNEL
43	STA: 4+65.55, 8.00' R	6921.91	78991.2184	78991.2184	TOP OF CONC CHANNEL
44	STA: 4+66.47, 17.51' R	6923.95	78994.0449	78994.0449	TOP OF SLOPE

**CONSTRUCTION NOTES**

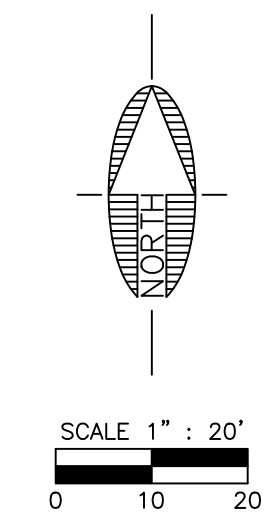
203 402 SF CONSTRUCT SHOTCRETE STRUCTURAL SECTION PER DETAIL 5 ON SHEET DT01.

275 7113 SF CONSTRUCT SHOTCRETE CHANNEL PER TYPICAL DETAIL 1 ON SHEET DT01.

NOTE:  
 1) ALL PROPOSED CONTOURS ARE TO FINISHED GRADE.  
 2) NOTE ALL REFERENCE STATIONS SHOWN HAVE CORRESPONDING CROSS SECTIONS SHOWN ON SHEET "GD03".

**CITY OF FLAGSTAFF APPROVAL STAMP**

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 NOT FOR CONSTRUCTION, BIDDING OR RECORDING



FLAGSTAFF ARIZONA

SPRUCE AVE. WASH IMPROVEMENTS

JOB NO: 20285 DATE: MAR 22 SCALE: AS SHOWN DRAWN: HAF DESIGN: KMF CHECKED: BD

110 W. Dole Avenue Flagstaff, AZ 86001 928.774.8934 fax 928.774.8934 www.swi.com

**SWI** Shephard Wesnitzer, Inc.

NO.	DESCRIPTION	DATE	BY

DRAWING NO. **GD01**

SHT NO. 6 OF 13

C.O.F. #PZ-21-00259

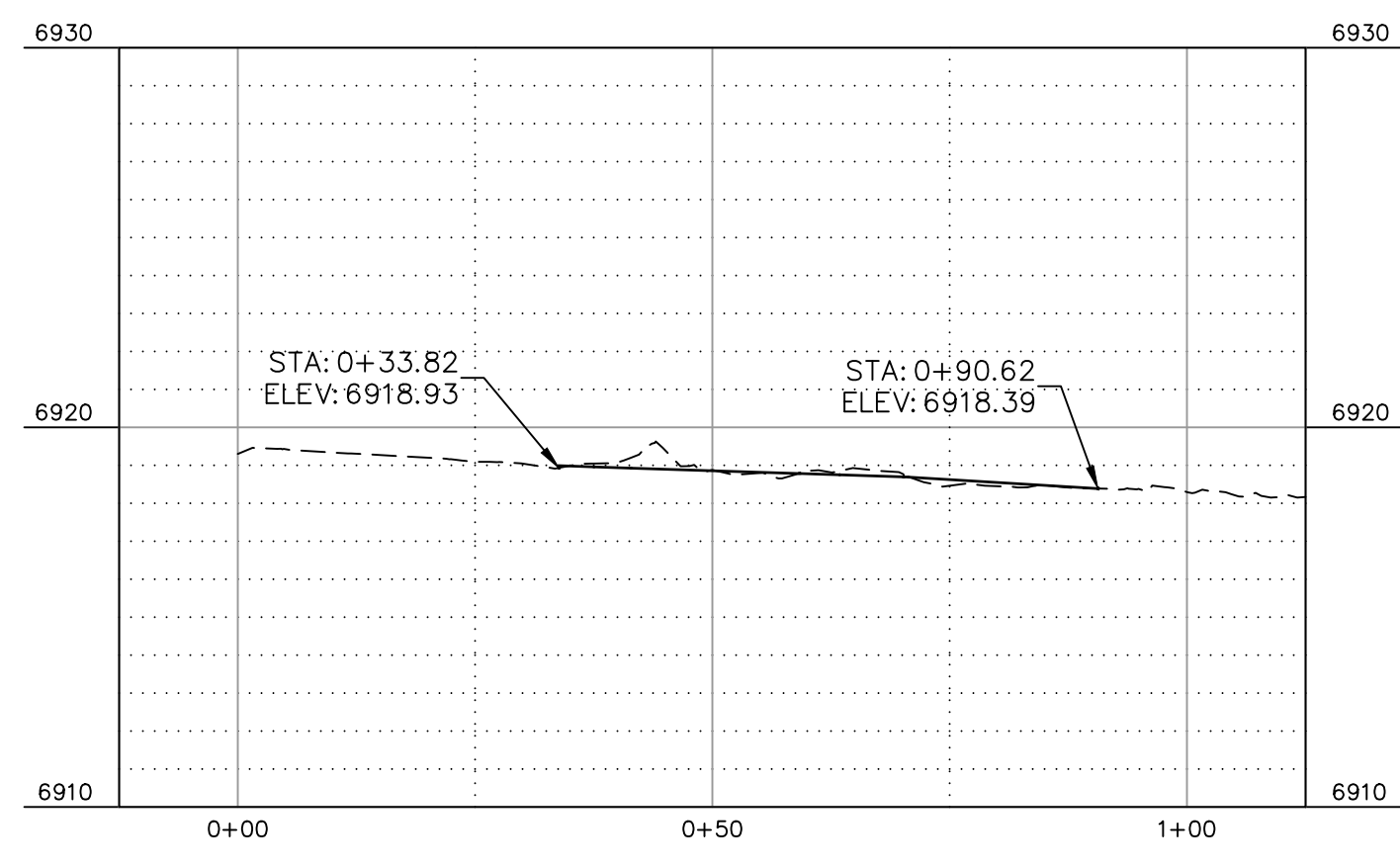




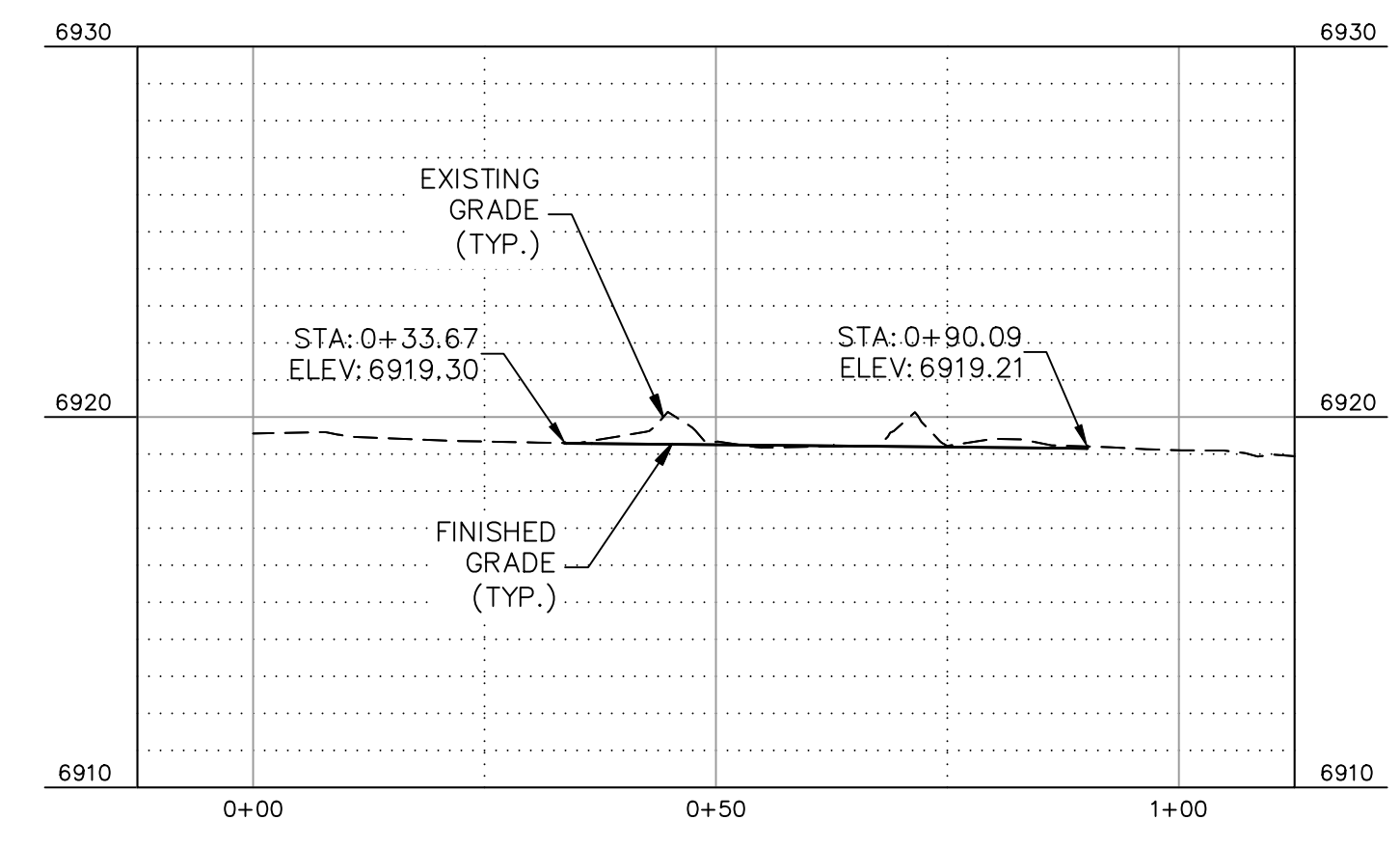


**ABBREVIATION LEGEND**

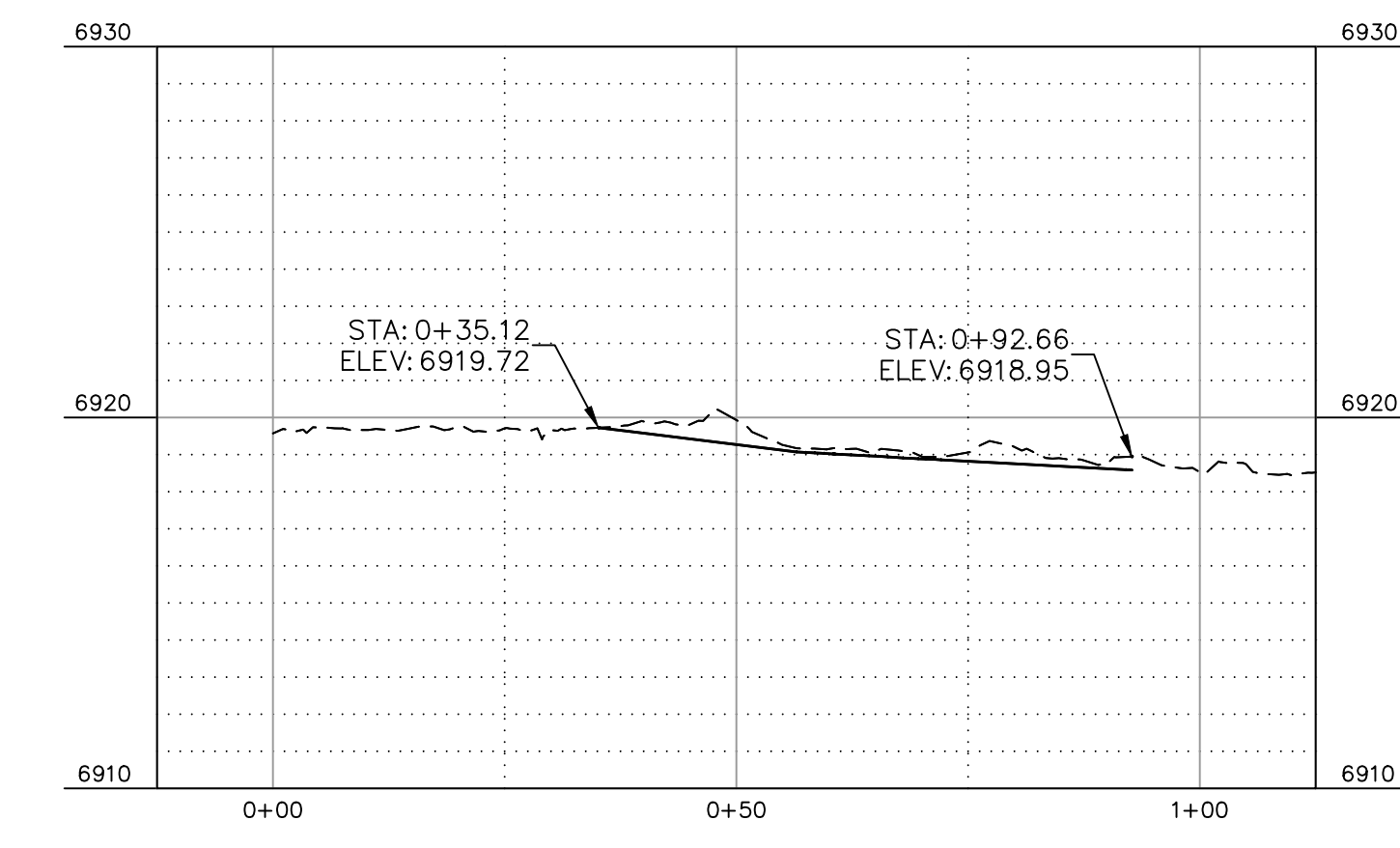
BLDG	BUILDING
C	TOP OF CONCRETE
FFE	FINISHED FLOOR ELEVATION
FG	FINISHED GRADE
FL	FLOWLINE
INV	PIPE INVERT
P	TOP OF PAVEMENT
RAD	RADIUS
RIM	CATCH BASIN
SW	SIDEWALK
TC	TOP OF CURB



**NORTH DORTHA ROAD ALIGNMENT PROFILE**



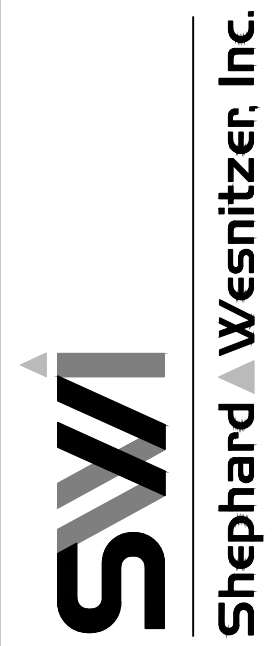
**CENTERLINE DORTHA ROAD ALIGNMENT PROFILE**



**SOUTH DORTHA ROAD ALIGNMENT PROFILE**

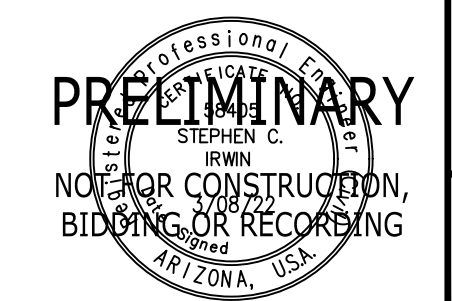
JOB NO:	20285
DATE:	MAR 22
SCALE:	AS SHOWN
DRAWN:	HAS
DESIGN:	KMF
CHECKED:	BD

110 W. Dole Avenue  
Flagstaff, AZ 86001  
928.774.0354  
928.774.8934 fax  
www.swi@az.com



NO.	DESCRIPTION	DATE	BY

**CITY OF FLAGSTAFF APPROVAL STAMP**



**PRELIMINARY**  
NOT FOR CONSTRUCTION,  
BIDDING OR RECORDING

Call at least two full working days before you begin excavation.  
**ARIZONA 811**  
Arizona Blue Stakes, Inc. (928-5348)  
Dial 8-1-1 or 1-800-514-1111 (928-5348)

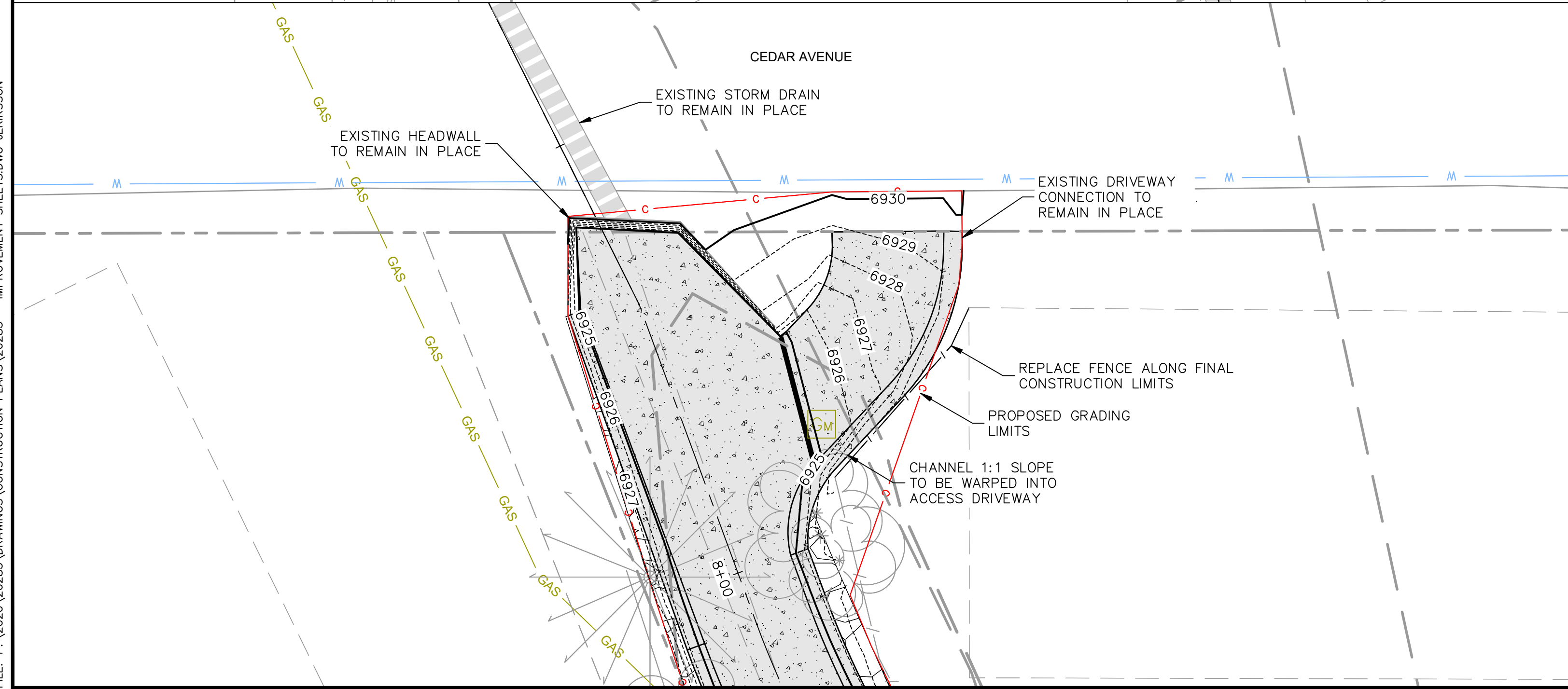
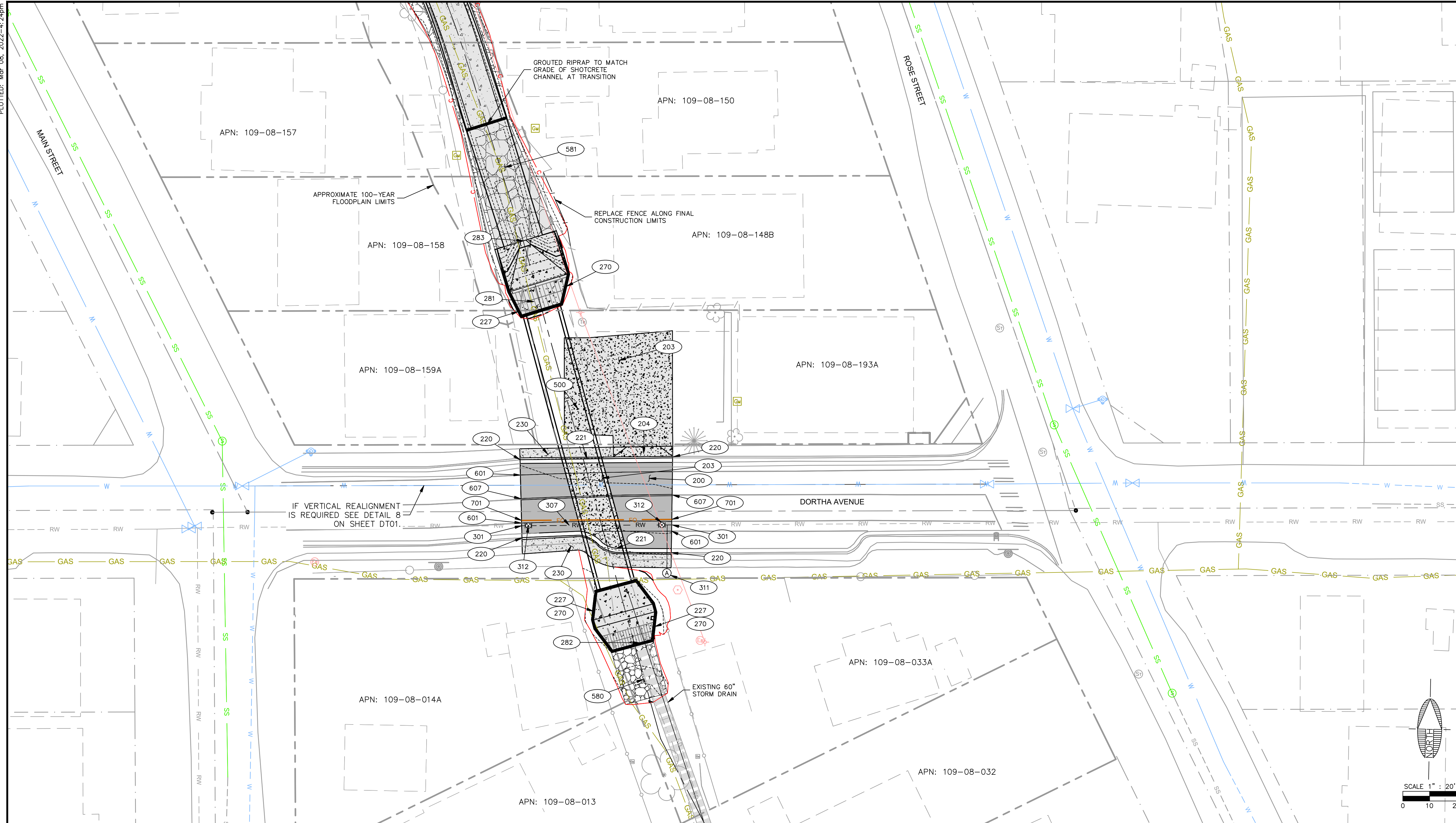
DRAWING NO.  
**GD04**

C.O.F. #PZ-21-00259

SHT NO. OF  
9 OF 13

PLOTTED: Mar 08, 2022 - 4:24pm

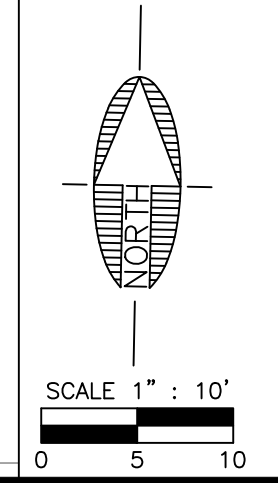
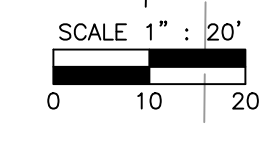
FILE: P:\2020\20285 DRAWINGS\CONSTRUCTION PLANS\20285 - IMPROVEMENT SHEETS.DWG BERIKSSON



### CONSTRUCTION NOTES

- 200 129 SY CONSTRUCT PAVEMENT STRUCTURAL SECTION PER DETAIL 3 ON SHEET DT01.
- 203 1,814 SF CONSTRUCT SHOTCRETE STRUCTURAL SECTION PER DETAIL 5 ON SHEET DT01.
- 204 80 SF CONSTRUCT DRIVEWAY PER MAG STD DTL 250-1 AND MATCH EXISTING 24' DRIVEWAY.
- 220 47 LF CONSTRUCT VERTICAL CURB AND GUTTER PER DETAIL 2 ON SHEET DT01.
- 221 33 LF CONSTRUCT MONOLITHIC CURB AND GUTTER PER PROFILE ON SHEET IPO1.
- 227 118 LF CONSTRUCT SAFETY RAIL PER M.A.G. STD. DTL. 145. MODIFIED VERTICAL BAR SPACE 4" ON CENTER AND PER SHEET IPO2.
- 230 357 SF CONSTRUCT CONCRETE SIDEWALK PER DETAIL 4 ON SHEET DT01. SIDEWALK WIDTH TO MATCH EXISTING.
- 270 3 EA CONSTRUCT CONCRETE HEADWALL PER M.A.G. STD. DTL. 501-3 AND MODIFIED AS SHOWN ON SHEET IPO2. CONTRACTOR TO REFER TO GEOTECH REPORT FOR SUBGRADE AND FOUNDATION PREPARATION.
- 281 1 EA INSTALL TRASH RACK PER M.A.G. STD. DTL. 502-1 AND 502-2. MODIFIED WITH 2" BARS AND SPACED 18" ON CENTER.
- 282 1 EA INSTALL TRASH RACK PER M.A.G. STD. DTL. 502-2 AND DETAIL 'D' ON SHEET IPO2.
- 283 1 EA CONSTRUCT DROP INLET PER M.A.G. STD. DTL. 501-5.
- 301 57 LF INSTALL 20" RECLAIM WATERLINE (DIP CLASS 350 - RESTRAINED) INCLUDING ALL APPURTENANCES PER M.A.G. SPEC. SECTION 601 AND 610 AND AS MODIFIED IN THE C.O.F. REVISIONS TO M.A.G. SECTION 13-21-001-0601. INSTALL TRACER WIRE ALONG WATERLINE PER C.O.F. STD. DTL. 9-01-020 ON SHEET DT01 AND C.O.F. SECTION 13-09-001-0002. TRENCH EXCAVATION, BACKFILLING AND COMPACTION PER C.O.F. STD. DTLS. 9-01-030, 9-01-031, AND 9-01-032 ON SHEET DT01.
- 307 1 EA CONSTRUCT 20" DIP CLASS 350 RESTRAINED WATER MAIN VERTICAL REALIGNMENT COMPLETE AND IN PLACE SIMILAR TO MAG STD DTL 370 WITH 4-45-DEGREE BENDS. ALL BENDS SHALL BE RESTRAINED PER MAG SPEC 610, 750, MAG STD DTL 303, AND AS MODIFIED PER C.O.F. ADDENDUMS TO MAG. DEFLECT WATERLINE TO PROVIDE 2' MIN. VERTICAL SEPARATION FROM OTHER EXISTING OR PROPOSED UTILITIES.
- 311 1 EA INSTALL 2" AIR RELEASE VALVE PER C.O.F. STD. DTL. 9-03-100.
- 312 2 EA INSTALL 20" GATE VALVE DIP CLASS 250, EPOXY-COATED RESILIENT SEAT (INCLUDING VALVE BOX AND COVER) PER M.A.G. STD. DTL. 340 AND M.A.G. SPEC 610. ADJUST BOX TO FINISH GRADE PER C.O.F. STD. DTLS. 9-03-060 AND 9-03-062 ON SHEET DT01. THRUST BLOCK PER M.A.G. STD. DTL. 301 AND AS MODIFIED BY C.O.F. REVISIONS TO M.A.G. SECTION 13-21-002-0380.
- 500 215 LF INSTALL 12'x8' CONCRETE BOX CULVERT PER ADOT STD. DTL. SD 601.01.
- 580 324 SF INSTALL D50=6" RIPRAP EROSION PROTECTION PLACED MIN. 12" THICK OVER MIRAFI 140N FILTER FABRIC PER DETAIL 6 ON SHEET DT01.
- 581 891 SF INSTALL GROUTED RIPRAP PER DETAIL 6 AND 7 ON SHEET DT01.
- 601 141 LF INSTALL 6" SOLID WHITE BIKE LANE STRIPING PER C.O.F. STD. DTL. 16-06-010.
- 607 56 LF INSTALL 4" DOUBLE YELLOW CENTERLINE STRIPING PER C.O.F. STD. DTL. 16-06-010. HORIZONTAL PLACEMENT AS SHOWN ON PLANS.
- 701 56 LF INSTALL 4-3" SCHEDULE 80 PVC CONDUIT (FIBER OPTIC) PER C.O.F. STD. DTL. 9-01-010 ON SHEET DT01 AND PER C.O.F. STANDARDS AND SPECIFICATIONS.

NOTES:  
1. HEADWALLS ARE MODIFIED FROM M.A.G. STANDARDS SHOWN ON IPO2.



## CITY OF FLAGSTAFF APPROVAL STAMP

**PRELIMINARY**  
NOT FOR CONSTRUCTION,  
BIDDING OR RECORDING

C.O.F. #PZ-21-00259

JOB NO: 20285		DATE: MAR 22	SCALE: AS SHOWN	DRAWN: HAF	DESIGN: KMF	CHECKED: BD
110 W. Dolé Avenue Flagstaff, AZ 86001 928.774.0354 928.774.8934 fax www.swi.gov.com						
REVISIONS	NO.	DESCRIPTION	DATE	BY		
DRAWING NO.		SHT NO.		OF		
IP01		10		13		

FLAGSTAFF ARIZONA  
SPRUCE AVE. WASH. IMPROVEMENTS  
IMPROVEMENT PLAN (1)



PLOTTED: Mar 08, 2022 - 4:24pm

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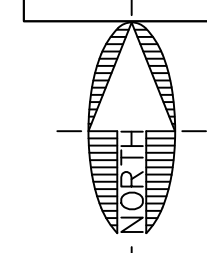


**LEGEND**

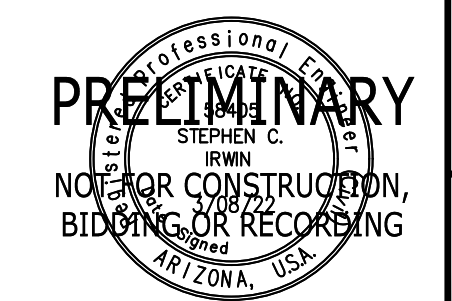
- LIMITS OF DISTURBED AREA
- DRAINAGE FLOW DIRECTION
- "STRAW ROLLS" PER DETAIL ON SHEET EC02.
- "TEMPORARY CONSTRUCTION ENTRANCE" PER DETAIL ON SHEET EC02.
- "CULVERT INLET PROTECTION" PER DETAIL ON SHEET EC02.
- DISTURBED AREA, 25,400± SF

JOB NO: 20285		DATE: MAR 22		SCALE: AS SHOWN		DRAWN: HAS		DESIGN: KMF		CHECKED: BD	
110 W. Dole Avenue Flagstaff, AZ 86001 928.774.0354		928.774.8934 fax		www.swi.coz.com		www.swi.coz.com		www.swi.coz.com		www.swi.coz.com	
REVISIONS		NO.	DESCRIPTION	DATE	BY						
CITY OF FLAGSTAFF APPROVAL STAMP											
		<p>Call at least two full working days before you begin excavation.</p> <p><b>ARIZONA 811</b> Arizona Blue Stakes, Inc. (928-5348)</p> <p>088 84-1 or 1-800-514-1111 (928-5348)</p>									
DRAWING NO. <b>EC01</b>											
SHT NO. 12 OF 13											
C.O.F. #PZ-21-00259											

CITY OF FLAGSTAFF APPROVAL STAMP



SCALE 1" = 20'  
0 10 20



FLAGSTAFF ARIZONA

SPRUCE AVE. WASH IMPROVEMENTS

**EROSION CONTROL PLAN**

Shephard Wesnitzer, Inc.

MANAGEMENT STRATEGIES

- 1. CONSTRUCTION WILL BE SEQUENCED SO THAT GRADING OPERATIONS CAN BEGIN AND END AS QUICKLY AS POSSIBLE.
2. INSTALL TEMPORARY CONSTRUCTION ENTRANCE, MUD AND DEBRIS SHALL BE WASHED FROM ALL CONSTRUCTION VEHICLES AND EQUIPMENT BEFORE LEAVING THE SITE.
3. INSTALL PERIMETER CONTROLS AS SHOWN TO INCLUDE DIVERSION DIKES AND SILT FENCE.
4. GRADING OPERATIONS MAY COMMENCE ONCE PERIMETER CONTROLS, DIVERSIONS AND TRAPPING MEASURES ARE INSTALLED.
5. FILL SLOPE SURFACES SHALL BE LEFT IN ROUGHENED CONDITION TO REDUCE SHEET AND RILL EROSION OF THE SLOPES.
6. TEMPORARY SEEDING, SODDING OR OTHER STABILIZATION METHODS WILL FOLLOW IMMEDIATELY AFTER GRADING.
7. ONCE THE UTILITIES, CURB AND GUTTER, AND THE ROADS ARE BROUGHT NEAR FINAL GRADE...
8. FOR VEGETATIVE STABILIZATION OF ALL DENUDED AREAS...
9. THE JOB SUPERINTENDENT SHALL BE RESPONSIBLE FOR THE INSTALLATION AND MAINTENANCE OF ALL EROSION AND SEDIMENT CONTROL PRACTICES.
10. AFTER ACHIEVING FINAL STABILIZATION, THE TEMPORARY EROSION & SILTATION CONTROLS WILL BE CLEANED UP AND REMOVED FROM THE SITE.

GENERAL LAND CONSERVATION NOTES

- 1. VEGETATED STABILIZATION MEASURES MUST BE INITIATED AS SOON AS PRECIPITATION OR IRRIGATION IS AVAILABLE.
2. ALL EROSION AND SILTATION CONTROL MEASURES ARE TO BE PLACED PRIOR TO OR AS THE FIRST STEP IN GRADING.
3. DURING CONSTRUCTION, ALL STORM SEWER INLETS WILL BE PROTECTED BY INLET PROTECTION

DEVICES, MAINTAINED AND MODIFIED AS REQUIRED BY CONSTRUCTION PROGRESS.
4. ANY DISTURBED AREA NOT COVERED BY NOTE #1 ABOVE AND NOT PAVED, SODDED OR BUILT UPON IS TO BE MULCHED WITH HAY OR STRAW MULCH AT THE RATE OF TWO TONS PER ACRE AND OVER-SEEDED AS SOON AS PRECIPITATION OR IRRIGATION IS AVAILABLE.

5. AT THE COMPLETION OF CONSTRUCTION PROJECTS, AND PRIOR TO THE RELEASE OF THE BOND, ALL TEMPORARY SILTATION AND EROSION CONTROLS SHALL BE REMOVED AND DISTURBED AREAS SHALL BE STABILIZED.
6. TEMPORARY DIVERSIONS, SEEDED AND MULCHED OR SILT FENCE AND OTHER CONTROL MEASURES AS INDICATED ON THE DRAWINGS PRIOR TO OR THE FIRST STEP IN EXCAVATION.

7. WHERE CONSISTENT WITH JOB SAFETY REQUIREMENTS, ALL EXCAVATED MATERIAL IS TO BE PLACED ON THE UPHILL SIDE OF TRENCHES. NO MATERIAL IS TO BE PLACED IN STREAMBEDS. NO STOCKPILE IS PERMITTED.
8. TEMPORARY SEEDING, SODDING OR OTHER STABILIZATION METHODS WILL FOLLOW IMMEDIATELY AFTER GRADING.

EROSION & SEDIMENT CONTROL STANDARD NOTES

- 1. THE CONTRACTOR MUST NOTIFY BLUE STAKE AT 1-800-STAKE-IT AT LEAST 24 HOURS PRIOR TO THE START OF CONSTRUCTION.
2. ALL EROSION CONTROL MEASURES SHOWN ON THE APPROVED PLAN MUST BE IN PLACE AND INSPECTED AND APPROVED BY THE PRIOR TO CLEARING, STRIPPING OF TOPSOIL OR GRADING.
3. THE CONTRACTOR SHALL POST A SIGN AT THE MAIN ENTRANCE TO THE CONSTRUCTION SITE...
4. THE CONTRACTOR'S REPRESENTATIVE IS RESPONSIBLE FOR THE INSTALLATION OF ANY ADDITIONAL EROSION CONTROL MEASURES NECESSARY TO PREVENT EROSION AND SEDIMENTATION.

5. ALL DISTURBED AREAS ARE TO DRAIN TO APPROVED SEDIMENT CONTROL MEASURES AT ALL TIMES DURING LAND DISTURBING ACTIVITIES AND DURING SITE DEVELOPMENT UNTIL COMPLETE AND ADEQUATE STABILIZATION IS ACHIEVED.
6. WATER MUST BE PUMPED INTO AN APPROVED FILTERING DEVICE DURING DEWATERING OPERATIONS.

7. THE CONTRACTOR'S REPRESENTATIVE SHALL INSPECT AND DOCUMENT ALL EROSION AND SEDIMENT CONTROL MEASURES DAILY AND AFTER EACH SIGNIFICANT RAINFALL. THE FOLLOWING ITEMS WILL BE CHECKED IN PARTICULAR:
A. GRAVEL OUTLETS WILL BE CHECKED REGULARLY FOR SEDIMENT BUILDUP WHICH WILL PREVENT DRAINAGE.
B. SILT FENCE AND SEDIMENT BARRIERS WILL BE CHECKED REGULARLY FOR UNDERMINING OR DETERIORATION OF THE FABRIC.

8. INSPECTION FORMS SHALL BE COMPLETED BY THE CONTRACTOR'S INSPECTOR WITH THE MINIMUM FOLLOWING INFORMATION: INSPECTION DATE, TITLE AND QUALIFICATIONS OF EACH INSPECTOR, WEATHER INFORMATION FOR PERIOD SINCE LAST INSPECTION, LOCATION OF DISCHARGE OF SEDIMENT OR OTHER POLLUTANTS, LIST OF BMPs THAT NEED TO BE MAINTAINED OR INADEQUATE, LIST ADDITIONAL NEEDED BMPs, CORRECTIVE ACTION REQUIRED, SOURCES OF ALL NON-STORMWATER AND CONTROL MEASURES, DATES WHEN MAJOR GRADING ACTIONS OCCURRED, POLLUTANT DISCHARGE STATUS OF STORAGE AREAS, AND DATES WHEN CONSTRUCTION ACTIVITIES CEASED.

9. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING INSPECTION RECORDS FOR AT LEAST THREE (3) YEARS FOLLOWING THE COMPLETION OF PROJECT.
10. THE SWPPP SHALL BE MODIFIED BY THE CONTRACTOR WITHIN 7 CALENDAR DAYS FOLLOWING THE INSPECTION OF AN INADEQUATE BMP WHEN NEEDED.

11. PERMANENT SOIL STABILIZATION SHALL BE APPLIED TO DENUDED AREAS WITHIN SEVEN (7) DAYS AFTER FINAL GRADE IS REACHED AND ALL WORK COMPLETED ON ANY PORTION OF THE SITE. TEMPORARY SOIL STABILIZATION SHALL BE APPLIED WITHIN SEVEN (7) DAYS TO DENUDED AREAS THAT MAY NOT BE AT FINAL GRADE BUT WILL REMAIN UNDISTURBED FOR LONGER THAN FOURTEEN (14) DAYS.

12. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES WILL BE REMOVED WITHIN 30 DAYS AFTER FINAL SITE STABILIZATION AND AFTER THE TEMPORARY MEASURES ARE NO LONGER NEEDED.
13. WHEN SEDIMENT IS TRANSPORTED ONTO A PAVED ROAD SURFACE, THE ROAD WILL BE CLEANED THOROUGHLY AT THE END OF EACH DAY.

14. AREAS WHICH ARE NOT TO BE DISTURBED WILL BE CLEARLY MARKED BY FLAGS, SIGNS, ETC.
15. FLOOD PLAIN LIMITS SHALL BE CLEARLY MARKED IN THE FIELD BY FLAGS, SIGNS, ETC.
16. TREE SAVE AREAS SHALL BE CLEARLY MARKED IN THE FIELD BY ORANGE SAFETY FENCE.

17. ORANGE SAFETY FENCE MUST BE INSTALLED AROUND ALL SILT TRAPS AND SEDIMENT BASINS.
18. SEEDING AND MULCHING SHALL BE IN ACCORDANCE WITH THE STANDARDS.
19. THE SWPPP SHALL BE MODIFIED BY THE CONTRACTOR WITHIN 15 BUSINESS DAYS FOLLOWING ANY CHANGE IN DESIGN.

20. THE SWPPP SHALL BE MODIFIED BY THE CONTRACTOR WITHIN 15 BUSINESS DAYS IF IT IS DETERMINED THAT DISCHARGE IS CAUSING OR CONTRIBUTING TO WATER QUALITY EXCEEDENCES OR THE SWPPP IS INEFFECTIVE.
21. PERMANENT SOIL STABILIZATION SHALL BE APPLIED TO DENUDED AREAS WITHIN SEVEN (7) DAYS AFTER FINAL GRADE IS REACHED AND ALL WORK COMPLETED ON ANY PORTION OF THE SITE.

22. DO NOT ALLOW BRUSHES OR PAINT CONTAINERS TO BE CLEANED OUT IN THE DIRT, STREET, GUTTER, OR STORM DRAINS.
23. STORE AND COVER DRY AND WET MATERIALS FROM CONCRETE PLACEMENT AWAY FROM DRAINAGE AREAS.
24. PERFORM WASHOUT OF CONCRETE TRUCKS IN DESIGNATED AREAS ONLY.

25. TEMPORARY SANITARY FACILITIES SHALL BE MAINTAINED IN GOOD WORKING ORDER BY A LICENSED SERVICE.
26. CONTRACTOR SHALL BE RESPONSIBLE FOR UPDATING HIS PLAN THROUGHOUT CONSTRUCTION AND INDICATE ANY AND ALL REVISIONS / UPDATES ON THIS PLAN.
27. CONTRACTOR SHALL CONDUCT HIS OPERATIONS IN SUCH A MANNER THAT STORM WATER WILL BE CONTAINED WITHIN THE PROJECT OR CHANNLED INTO THE STORM DRAIN SYSTEM PROVIDED THAT IT IS FREE FROM POLLUTANTS AND DEBRIS.

28. CITY APPROVAL OF PLANS DOES NOT RELIEVE THE DEVELOPER FROM CORRECTING ERRORS OR OMISSIONS DISCOVERED DURING CONSTRUCTION.
29. CLEARING AND GRUBBING SHOULD BE LIMITED TO AREAS THAT WILL RECEIVE IMMEDIATE GRADING.
30. SEDIMENT CONTROL SHALL BE USED AT THE TOE OF ANY ERODIBLE SLOPE.
31. CONTRACTOR SHALL IMMEDIATELY RESTORE ANY DAMAGED EROSION CONTROL MEASURE WITHIN THE PROJECT BOUNDARY.

32. FACES OF FINISHED OUT AND FILL SLOPES SHALL BE PREPARED AND MAINTAINED TO CONTROL AGAINST EROSION.
33. AFTER A RAIN STORM, ALL SILT AND DEBRIS SHALL BE REMOVED FROM STREETS, CHECK BERMS AND BASINS.
34. CONTRACTOR / SUBCONTRACTOR TRAINING IN SEDIMENT AND EROSION CONTROL IN ACCORDANCE WITH AZPDES.

35. THE PERMITTEE AND CONTRACTOR SHALL BE RESPONSIBLE, AND TAKE NECESSARY PRECAUTIONS, TO PREVENT PUBLIC TRESPASS ONTO AREAS WHERE IMPOUNDED WATER CREATES A HAZARDOUS CONDITION.
36. ALL DISTURBED AREAS SHALL BE HYDROSEEDED IN ACCORDANCE WITH CITY OF FLAGSTAFF ENGINEERING STANDARDS SECTION 13-17.
37. ONCE CONCRETE WASTES ARE WASHED INTO THE DESIGNATED AREA AND ALLOWED TO HARDEN, THE CONCRETE SHALL BE BROKEN UP, REMOVED AND DISPOSED OF PER BMP "SOLID WASTE MANAGEMENT."

38. HOLE, DEPRESSIONS OR OTHER GROUND DISTURBANCE CAUSED BY THE REMOVAL OF THE FACILITIES SHALL BE BACKFILLED AND REPAIRED.
39. THE CONCRETE WASHOUT SIGN SHALL BE INSTALLED WITHIN 30 FT OF THE TEMPORARY CONCRETE WASHOUT FACILITY.

40. TRAFFIC OR ACCESS AREAS TO PREVENT DISTURBANCE OR TRACKING.
41. TEMPORARY CONCRETE WASHOUT FACILITIES SHALL HAVE A TEMPORARY PIT (BELOW GRADE) OR BERMED AREA (ABOVE GRADE) OF SUFFICIENT VOLUME TO COMPLETELY CONTAIN ALL LIQUID AND WASTE CONCRETE MATERIALS GENERATED DURING WASHOUT PROCEDURES.
42. ONCE CONCRETE WASTES ARE WASHED INTO THE DESIGNATED AREA AND ALLOWED TO HARDEN, THE CONCRETE SHALL BE BROKEN UP, REMOVED AND DISPOSED OF PER BMP "SOLID WASTE MANAGEMENT."

43. WHEN TEMPORARY CONCRETE WASHOUT FACILITIES ARE NO LONGER REQUIRED FOR THE WORK, AS DETERMINED BY THE ENGINEER, THE HARDENED CONCRETE SHALL BE REMOVED AND PROPERLY DISPOSED OF.
44. THESE PLANS REPRESENT A REASONABLE EFFORT TO IMPLEMENT THE MOST CURRENT BEST MANAGEMENT PRACTICES (BMPs) IN MITIGATING STORM WATER POLLUTION DURING CONSTRUCTION.

45. MAINTENANCE: IN GENERAL, ALL EROSION & SEDIMENT CONTROL MEASURES WILL BE CHECKED DAILY AND AFTER EACH SIGNIFICANT RAINFALL.
46. THE DETAILS SHOWN ON THE DETAIL SHEET ARE BY SHEPHARD WESTNITZER, INC. AND BY EROSION DRAW 4.0 (COPYRIGHT 2002 © JOHN MCULLAH) UNDER A LICENSE AGREEMENT.

47. TEMPORARY CONCRETE WASHOUT FACILITY NOTES: CONTRACTOR TO DESIGNATE EQUIP./MATERIAL STORAGE SITE AND CONCRETE WASHOUT AS PART OF SWPPP PRIOR TO START OF CONSTRUCTION.
48. TEMPORARY CONCRETE WASHOUT FACILITIES SHALL BE LOCATED A MINIMUM OF 50 FEET FROM STORM DRAIN INLETS, OPEN DRAINAGE FACILITIES AND WATERCOURSES.

49. TEMPORARY CONCRETE WASHOUT FACILITIES SHALL BE LOCATED A MINIMUM OF 50 FEET FROM STORM DRAIN INLETS, OPEN DRAINAGE FACILITIES AND WATERCOURSES, UNLESS DETERMINED UNFEASIBLE BY ENGINEER.
50. TEMPORARY CONCRETE WASHOUT FACILITIES SHALL BE LOCATED AWAY FROM CONSTRUCTION TRAFFIC OR ACCESS AREAS TO PREVENT DISTURBANCE OR TRACKING.

VEGETATIVE PRACTICES

- 1. TOP SOILING (STOCKPILE) TOPSOIL WILL BE STRIPPED FROM AREAS TO BE GRADED AND STOCKPILED FOR LATER USE.
2. CLEAN UP SPILLS WITH ABSORBENT MATERIALS.
3. KEEP WORK SITE CLEAN AND ORDERLY DAILY.
4. PROPERLY STORE PAINTS AND SOLVENTS.
5. PERMANENTLY MARK STORM DRAIN STRUCTURES IN A MANNER APPROVED BY THE CONSTRUCTION INSPECTOR.
6. ALLOW MATERIAL DELIVERY AND STORAGE ONLY IN DESIGNATED AREAS.
7. MINIMIZE THE USE OF HAZARDOUS MATERIALS ON SITE.
8. CLEAN UP LEAKS AND SPILLS IMMEDIATELY.
9. USE WATERTIGHT DUMPSTERS FOR TRASH AND CONSTRUCTION WASTE.
10. COLLECT SITE TRASH AS NEEDED, ESPECIALLY DURING RAINY OR WINDY CONDITIONS.
11. ARRANGE FOR REGULAR WASTE COLLECTION BEFORE CONTAINERS OVERFLOW.
12. DO NOT ALLOW BRUSHES OR PAINT CONTAINERS TO BE CLEANED OUT IN THE DIRT, STREET, GUTTER, OR STORM DRAINS.
13. STORE AND COVER DRY AND WET MATERIALS FROM CONCRETE PLACEMENT AWAY FROM DRAINAGE AREAS.
14. PERFORM WASHOUT OF CONCRETE TRUCKS IN DESIGNATED AREAS ONLY.

GENERAL NOTES FOR EROSION CONTROL

- 1. A STANDBY CREW FOR EMERGENCY WORK SHALL BE AVAILABLE AT ALL TIMES DURING THE RAINY SEASON.
2. DEVICES SHALL NOT BE MOVED OR MODIFIED WITHOUT APPROVAL OF THE INSPECTOR.
3. ALL PROTECTIVE DEVICES SHOWN SHALL BE IN PLACE AT THE END OF EACH DAY.
4. AFTER A RAIN STORM, ALL SILT AND DEBRIS SHALL BE REMOVED FROM CHECK BERMS AND DESILTING BASINS.

5. FILL SLOPES AT THE CONSTRUCTION SITE PERIMETER MUST DRAIN AWAY FROM THE TOPS OF THE SLOPES AT THE END OF EACH DAY.
6. A COPY OF THE PROJECTS STORM WATER POLLUTION PROTECTION PLAN (SWPPP) SHALL BE MAINTAINED AT THE CONSTRUCTION SITE AND ALWAYS AVAILABLE FOR REVIEW.
7. PROTECT ALL STORM DRAINAGE STRUCTURES FROM SEDIMENT CLOGGING BY PROVIDING INLET PROTECTION AT ALL OPENINGS.
8. AVOID PAVING DURING WET WEATHER.
9. STORE MATERIALS AWAY FROM DRAINAGE COURSES TO PREVENT CONTACT WITH STORM WATER.

10. PLACE DRIP PANS OR ABSORBENT MATERIALS UNDER CONSTRUCTION EQUIPMENT WHEN NOT IN USE.
11. CLEAN UP SPILLS WITH ABSORBENT MATERIALS.
12. OLD ASPHALT MUST BE DISPOSED OF PROPERLY.
13. KEEP WORK SITE CLEAN AND ORDERLY DAILY.
14. PROPERLY STORE PAINTS AND SOLVENTS.
15. PERMANENTLY MARK STORM DRAIN STRUCTURES IN A MANNER APPROVED BY THE CONSTRUCTION INSPECTOR.

16. ALLOW MATERIAL DELIVERY AND STORAGE ONLY IN DESIGNATED AREAS AND AVOID TRANSPORT NEAR DRAINAGE PATHS AND WATERWAYS.
17. MINIMIZE THE USE OF HAZARDOUS MATERIALS ON SITE.
18. CLEAN UP LEAKS AND SPILLS IMMEDIATELY.
19. USE WATERTIGHT DUMPSTERS FOR TRASH AND CONSTRUCTION WASTE.
20. COLLECT SITE TRASH AS NEEDED, ESPECIALLY DURING RAINY OR WINDY CONDITIONS.
21. ARRANGE FOR REGULAR WASTE COLLECTION BEFORE CONTAINERS OVERFLOW.

22. DO NOT ALLOW BRUSHES OR PAINT CONTAINERS TO BE CLEANED OUT IN THE DIRT, STREET, GUTTER, OR STORM DRAINS.
23. STORE AND COVER DRY AND WET MATERIALS FROM CONCRETE PLACEMENT AWAY FROM DRAINAGE AREAS.
24. PERFORM WASHOUT OF CONCRETE TRUCKS IN DESIGNATED AREAS ONLY.

25. TEMPORARY SANITARY FACILITIES SHALL BE MAINTAINED IN GOOD WORKING ORDER BY A LICENSED SERVICE.
26. CONTRACTOR SHALL BE RESPONSIBLE FOR UPDATING HIS PLAN THROUGHOUT CONSTRUCTION AND INDICATE ANY AND ALL REVISIONS / UPDATES ON THIS PLAN.
27. CONTRACTOR SHALL CONDUCT HIS OPERATIONS IN SUCH A MANNER THAT STORM WATER WILL BE CONTAINED WITHIN THE PROJECT OR CHANNLED INTO THE STORM DRAIN SYSTEM PROVIDED THAT IT IS FREE FROM POLLUTANTS AND DEBRIS.

28. CITY APPROVAL OF PLANS DOES NOT RELIEVE THE DEVELOPER FROM CORRECTING ERRORS OR OMISSIONS DISCOVERED DURING CONSTRUCTION.
29. CLEARING AND GRUBBING SHOULD BE LIMITED TO AREAS THAT WILL RECEIVE IMMEDIATE GRADING.
30. SEDIMENT CONTROL SHALL BE USED AT THE TOE OF ANY ERODIBLE SLOPE.
31. CONTRACTOR SHALL IMMEDIATELY RESTORE ANY DAMAGED EROSION CONTROL MEASURE WITHIN THE PROJECT BOUNDARY.

32. FACES OF FINISHED OUT AND FILL SLOPES SHALL BE PREPARED AND MAINTAINED TO CONTROL AGAINST EROSION.
33. AFTER A RAIN STORM, ALL SILT AND DEBRIS SHALL BE REMOVED FROM STREETS, CHECK BERMS AND BASINS.
34. CONTRACTOR / SUBCONTRACTOR TRAINING IN SEDIMENT AND EROSION CONTROL IN ACCORDANCE WITH AZPDES.

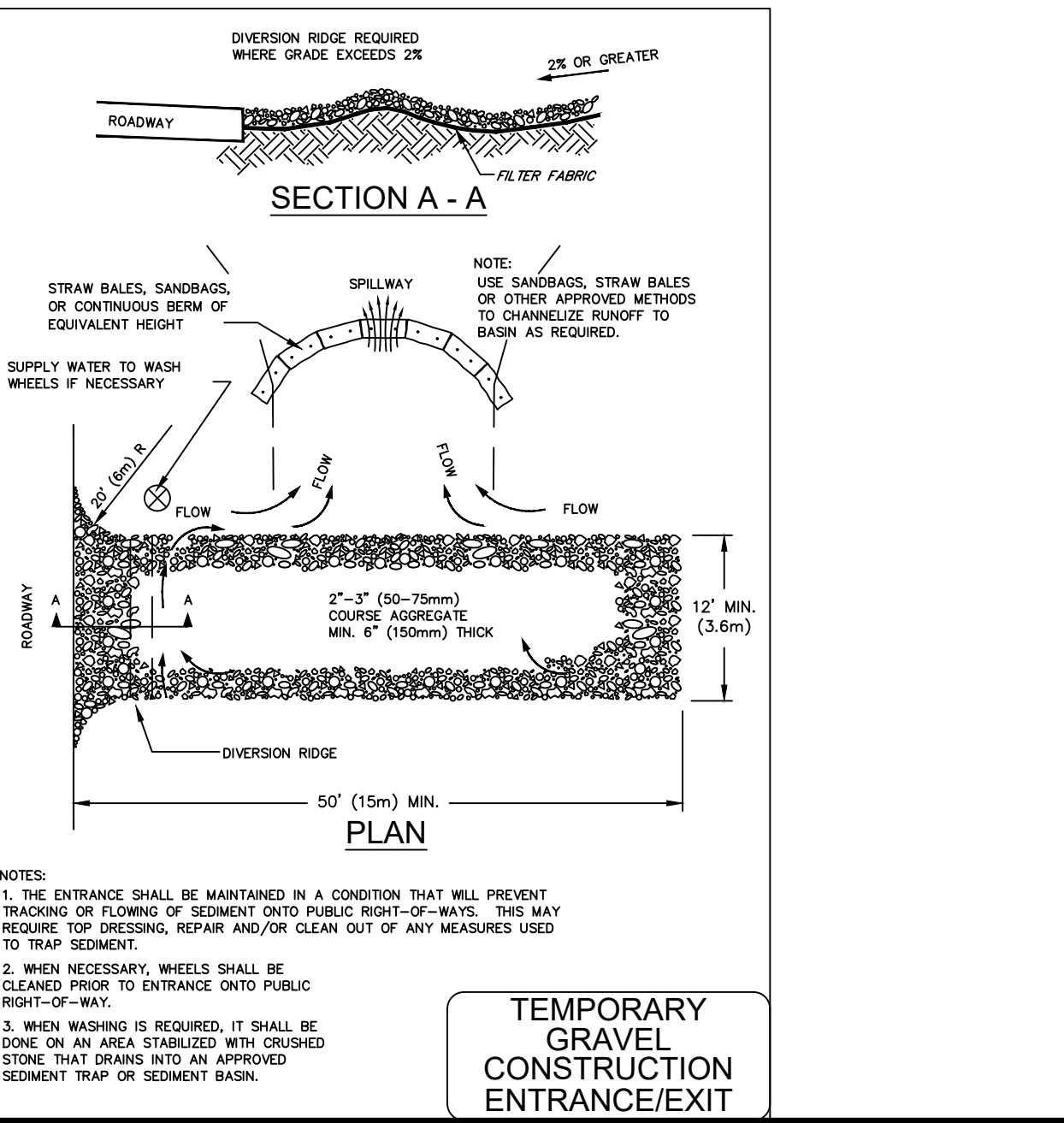
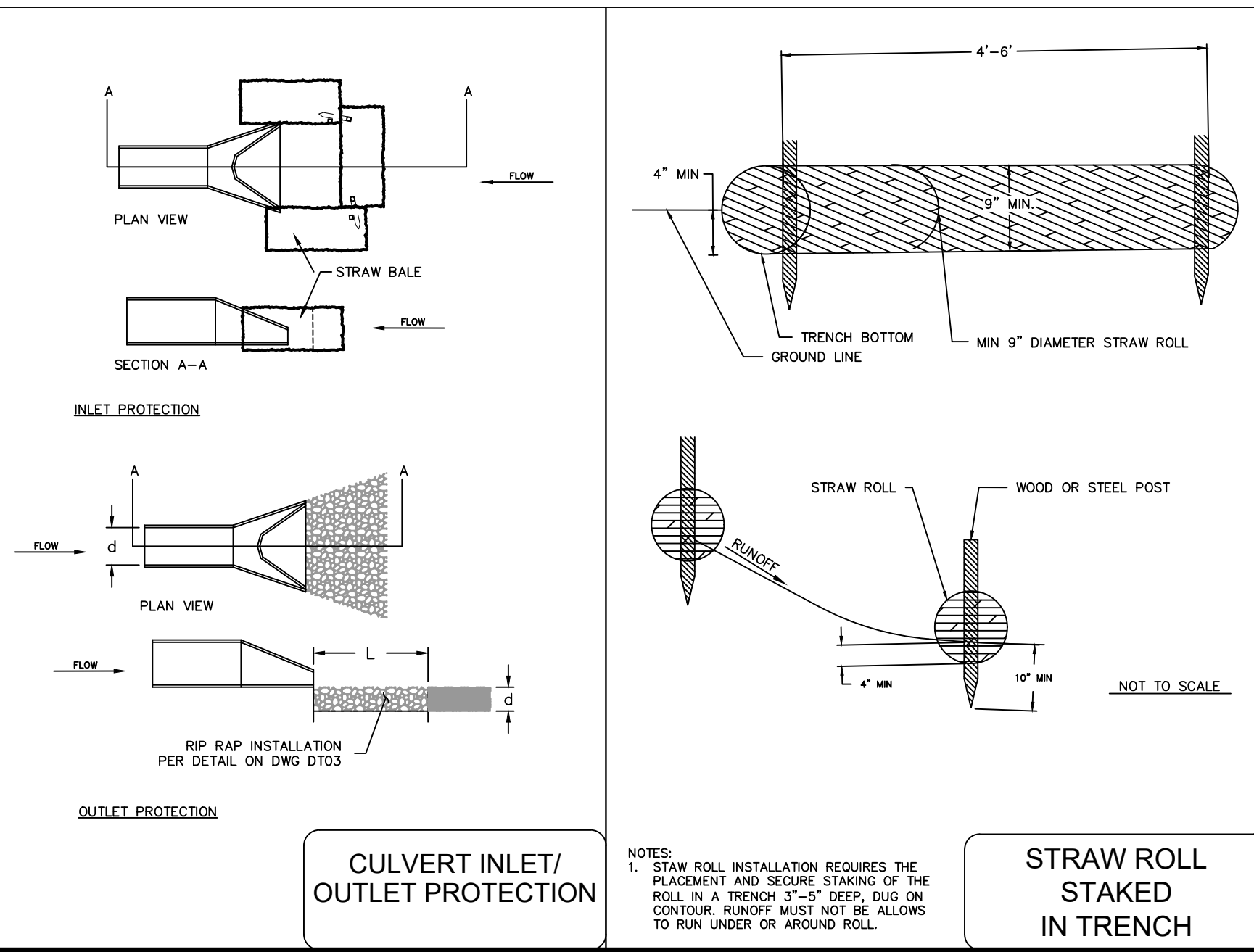
35. THE PERMITTEE AND CONTRACTOR SHALL BE RESPONSIBLE, AND TAKE NECESSARY PRECAUTIONS, TO PREVENT PUBLIC TRESPASS ONTO AREAS WHERE IMPOUNDED WATER CREATES A HAZARDOUS CONDITION.
36. ALL DISTURBED AREAS SHALL BE HYDROSEEDED IN ACCORDANCE WITH CITY OF FLAGSTAFF ENGINEERING STANDARDS SECTION 13-17.

37. ONCE CONCRETE WASTES ARE WASHED INTO THE DESIGNATED AREA AND ALLOWED TO HARDEN, THE CONCRETE SHALL BE BROKEN UP, REMOVED AND DISPOSED OF PER BMP "SOLID WASTE MANAGEMENT."

38. HOLE, DEPRESSIONS OR OTHER GROUND DISTURBANCE CAUSED BY THE REMOVAL OF THE FACILITIES SHALL BE BACKFILLED AND REPAIRED.
39. THE CONCRETE WASHOUT SIGN SHALL BE INSTALLED WITHIN 30 FT OF THE TEMPORARY CONCRETE WASHOUT FACILITY.

GENERAL NOTES

- 1. ALL CONSTRUCTION SHALL CONFORM TO MAG STANDARDS, AZPDES STANDARDS AND SPECIFICATIONS AND GENERALLY ACCEPTED CONSTRUCTION PRACTICE.
2. THESE PLANS REPRESENT A REASONABLE EFFORT TO IMPLEMENT THE MOST CURRENT BEST MANAGEMENT PRACTICES (BMPs) IN MITIGATING STORM WATER POLLUTION DURING CONSTRUCTION.



NOTES:
1. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAY.
2. WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY.
3. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.

CITY OF FLAGSTAFF APPROVAL STAMP

PRELIMINARY PROFESSIONAL ENGINEER SEAL FOR STEPHEN C. BRIN

C.O.F. #PZ-21-00259

Vertical sidebar containing project information: JOB NO. 20285, DATE MAR 22, SCALE AS SHOWN, DRAWN HAS, DESIGN KMF, CHECKED BD, and revision table with columns for NO., DESCRIPTION, DATE, and BY.

DRAWING NO. EC02, SHT NO. 13 OF 13