

CITY OF SAN LUIS JUAN SANCHEZ BLVD LIFT STATION

Mayor

GERARDO SANCHEZ

Vice-Mayor

MATIAS ROSALES

City Council

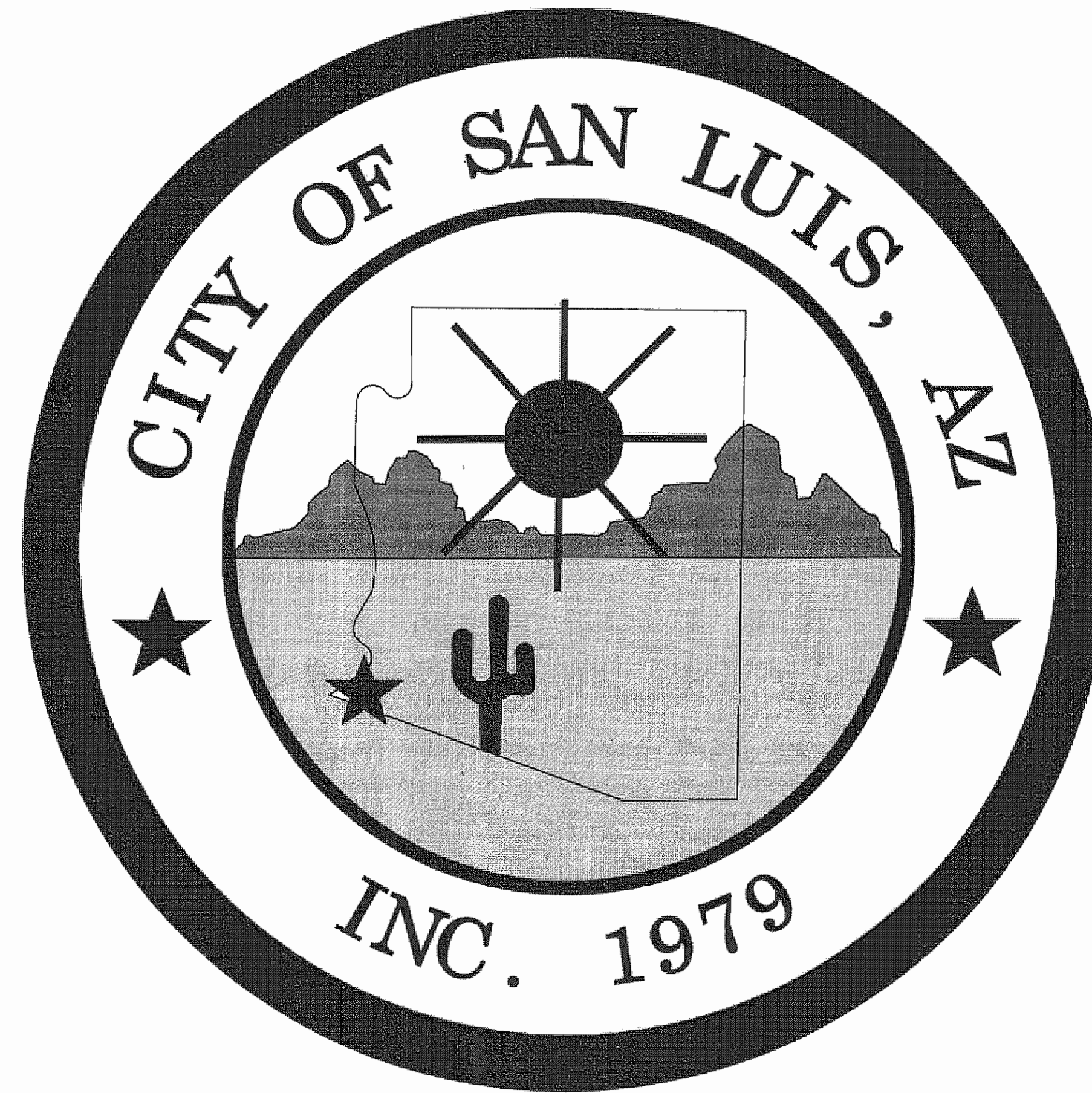
RUBEN WALSH

AFRICA LUNA-CARRASCO

MARIA CECILIA RAMOS

MARIO BUCHANAN JR.

GLORIA TORRES



Interim City Manager

TADEO DE LA HOYA

Director of Public Works

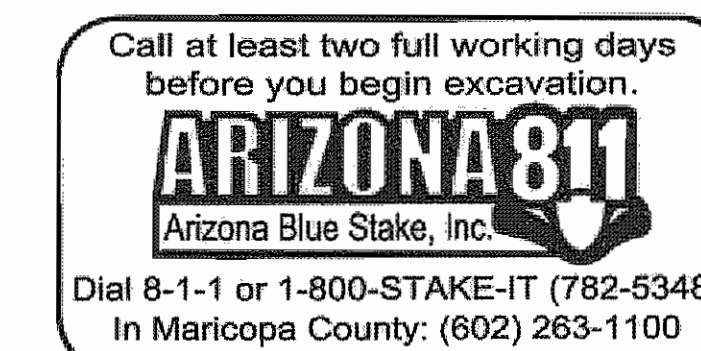
EULOGIO VERA

APPROVED:  _____
Interim City Manager

08/02/2016
Date:

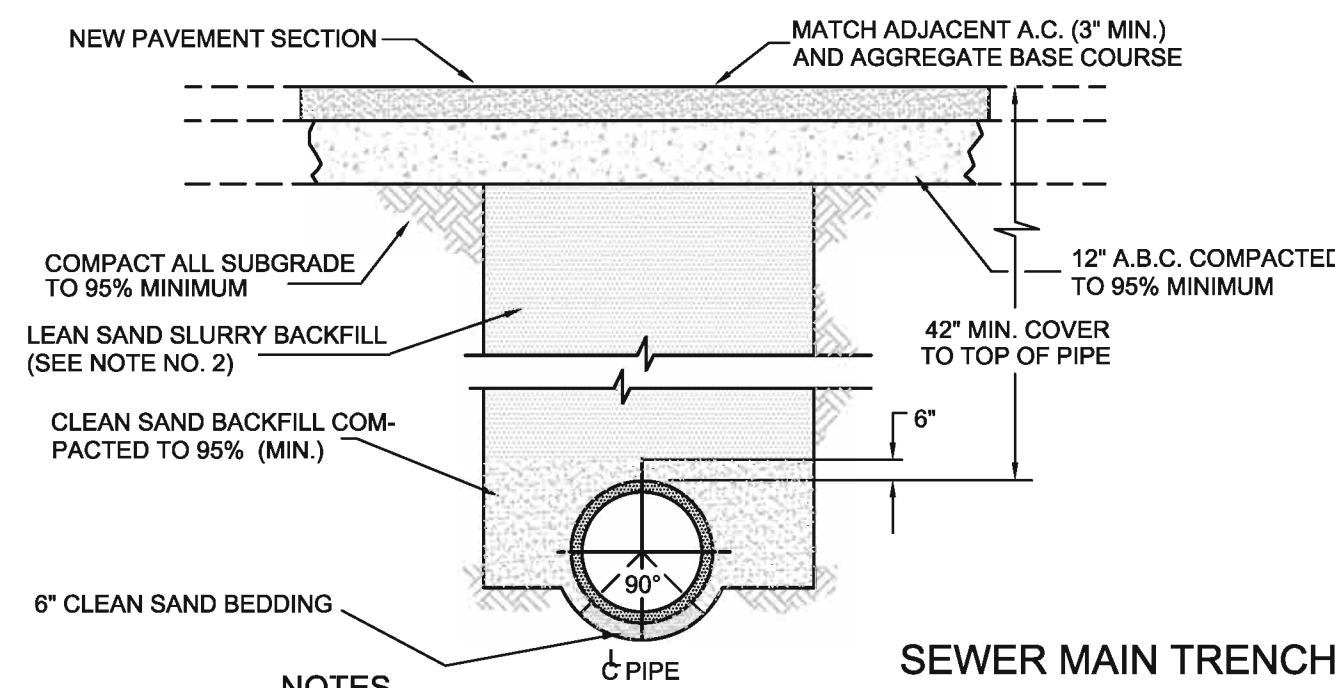
APPROVED:  _____
Director of Public Works

08/01/16
Date:



PREPARED BY: _____

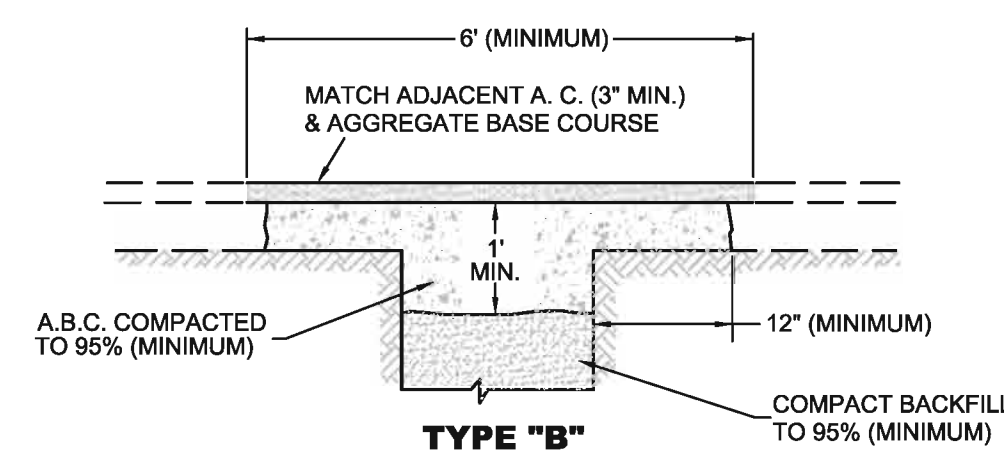




- NOTES**
- Native soil may be used for backfill when approved by the City Engineer.
 - Lean sand slurry shall consist of one sack of cement per cubic yard of clean sand.
 - Bedding shown is a minimum standard for shallow trenches and acceptable native base. Exact type of bedding shall be determined by the City Engineer.
 - Ditch sides shall be sloped or shored as required per O.S.H.A. standards.
 - All trenches shall be cold-patched if left open to traffic. All trenches shall be hot-mix paved within two (2) weeks of its excavation.

TYPICAL DITCH BACKFILL

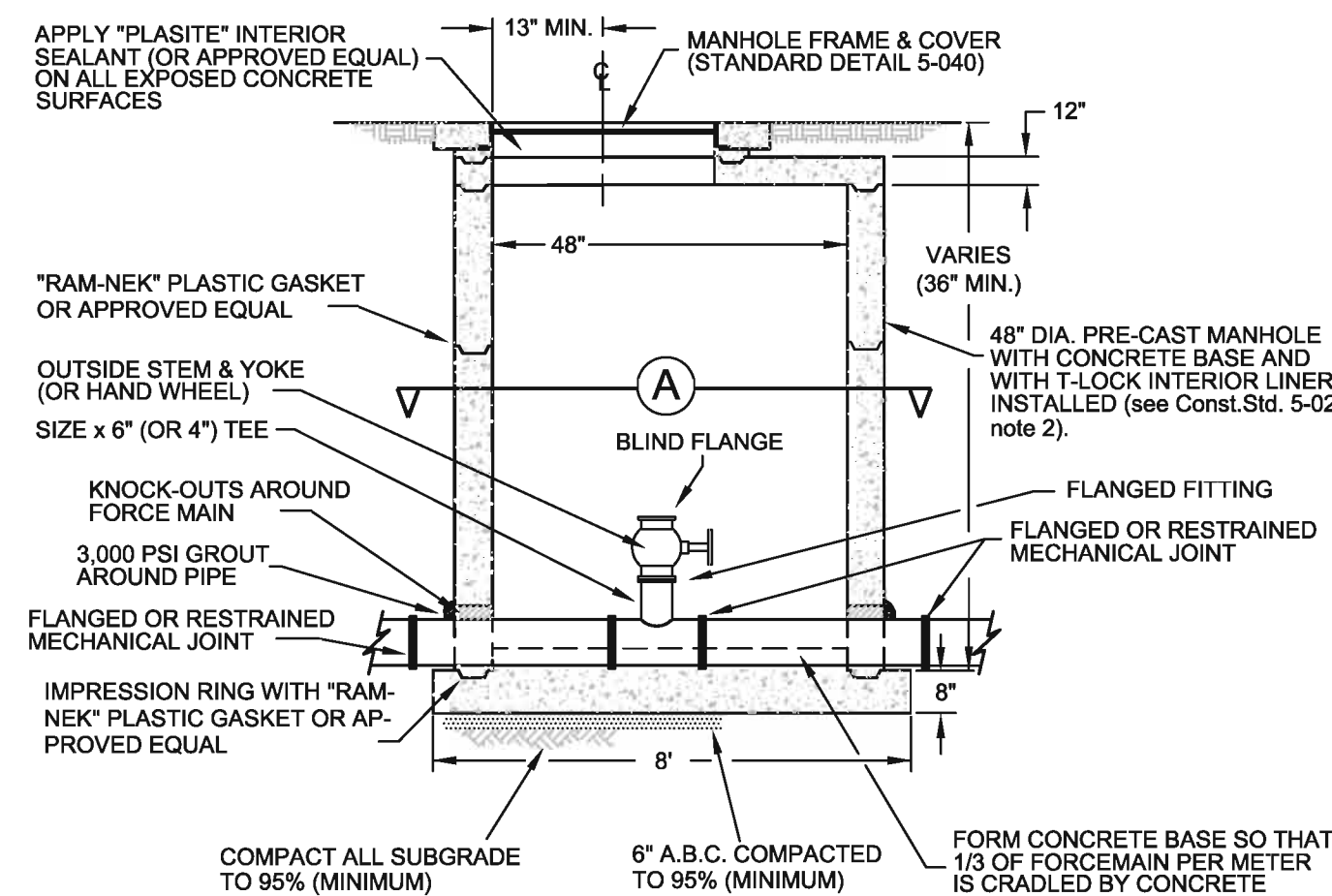
NTS **A**
DT-01



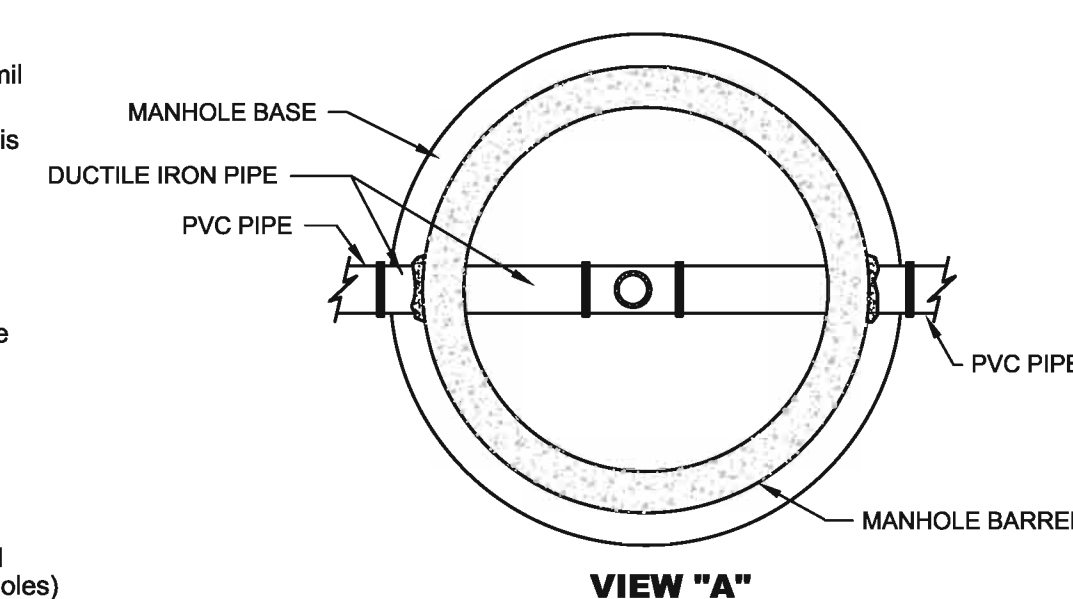
- NOTES**
- This detail is to be used for trench backfill and pavement replacement.
 - All cut edges shall be sawcut to a true regular line and free of all foreign matter.
 - Edges of asphalt pavement shall be painted with emulsified asphalt or hot asphalt before permanent repair material is placed.
 - Type "B" repairs will not be permitted without prior approval of the City Engineer.
 - Asphaltic concrete for pavement repairs shall meet or be equivalent to requirements of the latest Standard Specification published by the City of Yuma.
 - Pavement replacement in State highways or County highways shall be in accordance with ADOT and/or Yuma County requirements.
 - Lean sand slurry shall consist of one sack of cement per cubic yard of clean sand.
 - All trenches shall be cold-patched if left open to traffic prior to hot-mix paving. All trenches shall be hot-mix paved within two (2) weeks from its excavation.

TRENCH

NTS **B**
DT-01

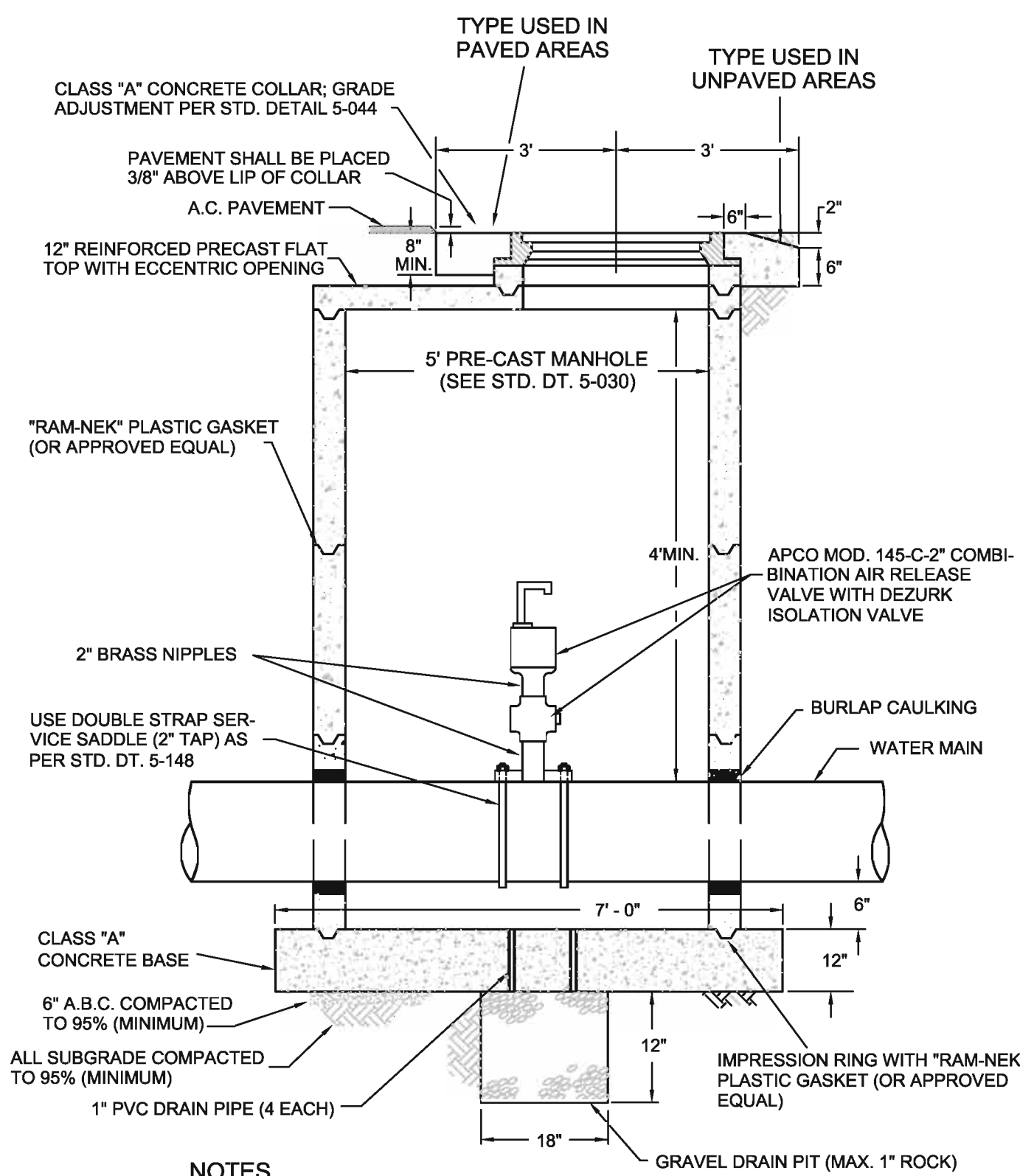


- NOTES**
- All buried ductile iron pipe must be wrapped with 10 mil (minimum) polyethylene plastic wrap.
 - The maximum spacing between this type of cleanout is 600' on 8" and larger force mains.
 - Emphasis shall be placed on the special hardware necessary for use in a pressure system.
 - There shall be no pipe joints within two feet (2') of a manhole's exterior wall face.
 - Back fill used to fill manhole excavation shall be a one sack cement per cubic yard of sand slurry mixture.
 - Apply asphalt waterproofing to the exterior surfaces of the manhole. Apply asphalt caulking to seal all joints.
 - Precast concrete manholes shall have a PVC T-Lock liner, sealed gas tight, as manufactured by Ameron (or approved equal). Liner and interior surfaces shall be spark tested:(applies only to sanitary sewer manholes) see Arizona Administrative Code R18-9-E 301 D.3.e Manholes General Permit: Sewage Collection Systems pertaining to Holiday testing.
 - No drains allowed in base.



FORCE MAIN PRESSURE CLEANOUT

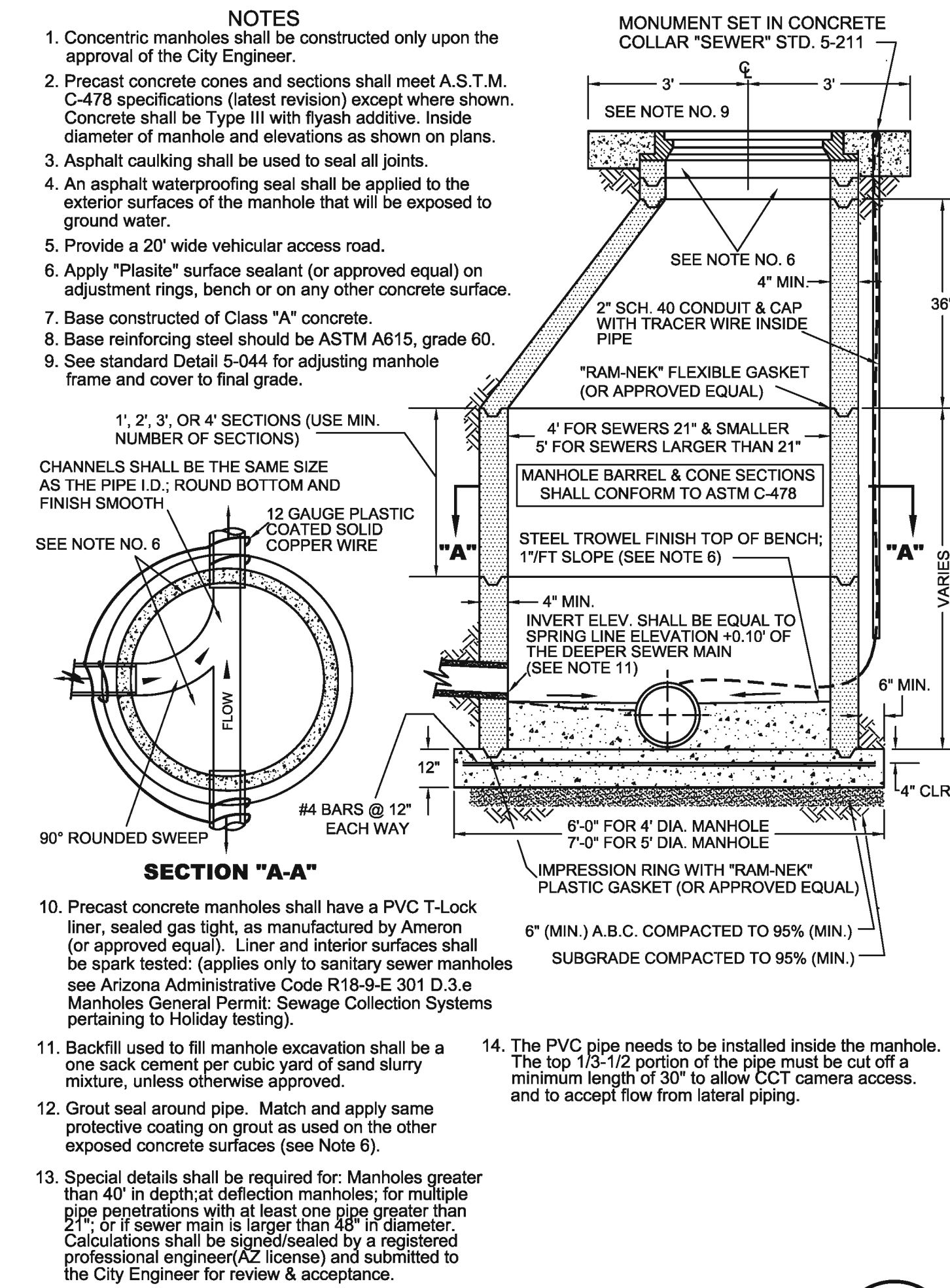
NTS **C**
DT-01



- NOTES**
- Manhole frame and cover shall be Neenah Foundry R-1595 or R-1642 with the word SEWER cast into the cover.
 - There shall be no pipe joints within two feet (2') of the manhole's exterior wall face.
 - Backfill used to fill manhole excavation shall be lean sand slurry consisting of one sack of cement per cubic yard of clean sand. Protect water main from direct contact with concrete backfill.
 - Apply asphalt waterproofing seal to the exterior surfaces of the manhole. Apply asphalt caulking to seal all joints.

AIR RELEASE VALVE

NTS **D**
DT-01



- NOTES**
- Concentric manholes shall be constructed only upon the approval of the City Engineer.
 - Precast concrete cones and sections shall meet A.S.T.M. C-478 specifications (latest revision) except where shown. Concrete shall be Type III with flyash additive. Inside diameter of manhole and elevations as shown on plans.
 - Asphalt caulking shall be used to seal all joints.
 - An asphalt waterproofing seal shall be applied to the exterior surfaces of the manhole that will be exposed to ground water.
 - Provide a 20" wide vehicular access road.
 - Apply "Plasite" surface sealant (or approved equal) on adjustment rings, bench or on any other concrete surface.
 - Base constructed of Class "A" concrete.
 - Base reinforcing steel should be ASTM A615, grade 60.
 - See standard Detail 5-044 for adjusting manhole frame and cover to final grade.
 - Precast concrete manholes shall have a PVC T-Lock liner, sealed gas tight, as manufactured by Ameron (or approved equal). Liner and interior surfaces shall be spark tested:(applies only to sanitary sewer manholes see Arizona Administrative Code R18-9-E 301 D.3.e Manholes General Permit: Sewage Collection Systems pertaining to Holiday testing).
 - Backfill used to fill manhole excavation shall be a one sack cement per cubic yard of sand slurry mixture, unless otherwise approved.
 - Grout seal around pipe. Match and apply same protective coating on grout as used on the other exposed concrete surfaces (see Note 6).
 - Special details shall be required for: Manholes greater than 40' in depth;at deflection manholes; for multiple pipe penetrations with at least one pipe greater than 24"; or if sewer main is larger than 48" in diameter. Calculations shall be signed/sealed by a registered professional engineer(AZ license) and submitted to the City Engineer for review & acceptance.
 - The PVC pipe needs to be installed inside the manhole. The top 1/3-1/2 portion of the pipe must be cut off a minimum length of 30" to allow CCT camera access. and to accept flow from lateral piping.

15'-40' PRE-CAST CONCRETE MANHOLE

NTS **E**
DT-01

DRAWINGS ISSUE RECORD:
DATE:

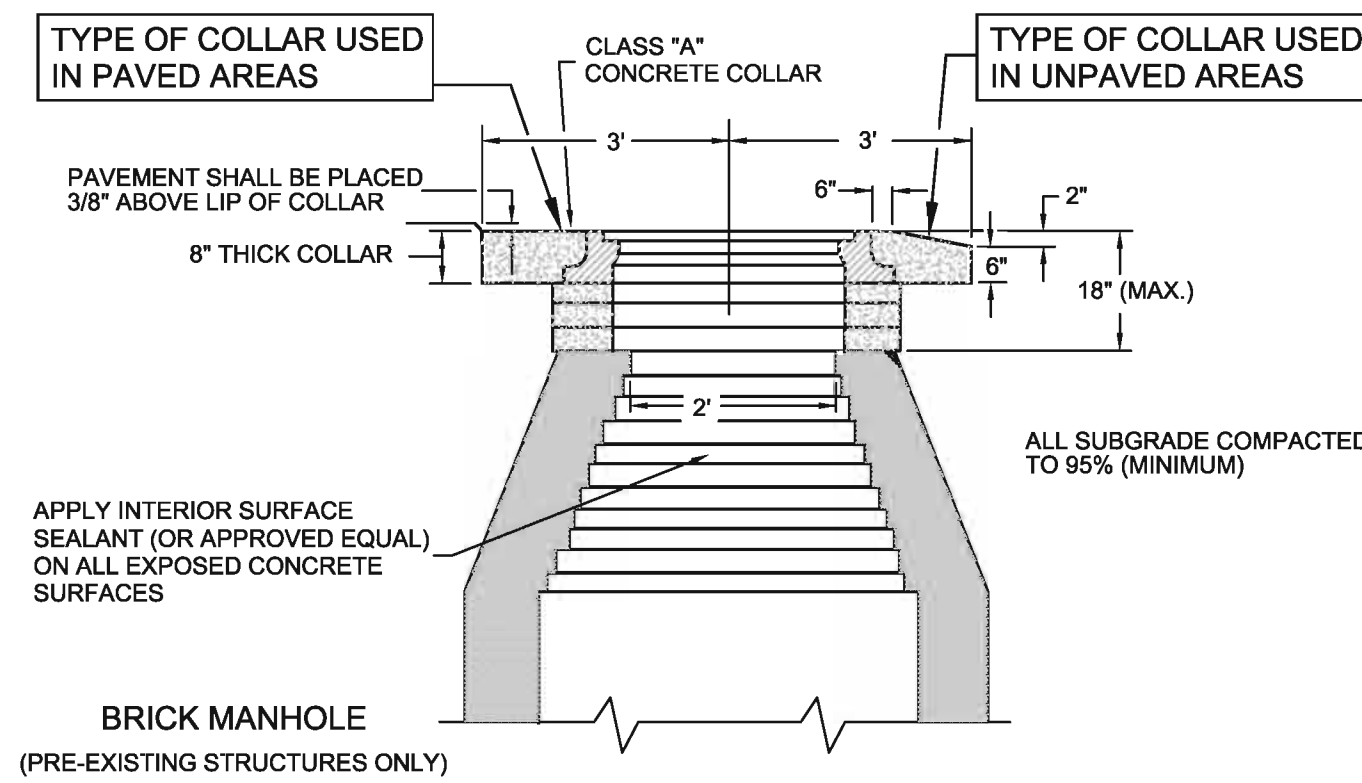
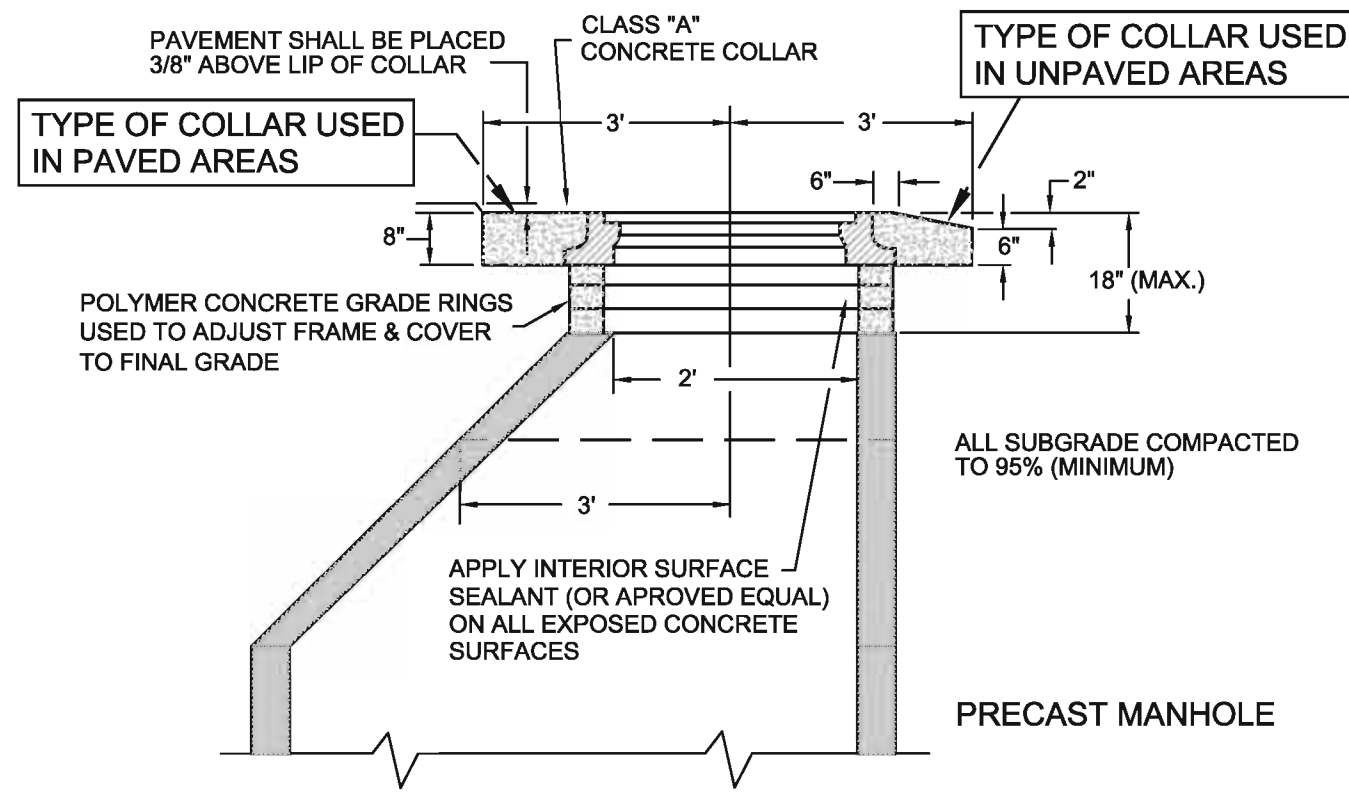
1500 S. 5th Avenue
Yuma, AZ 85364
Phone: (928) 810-0825
www.dahlrobins.com

DAHL, ROBINS & ASSOCIATES, INC.

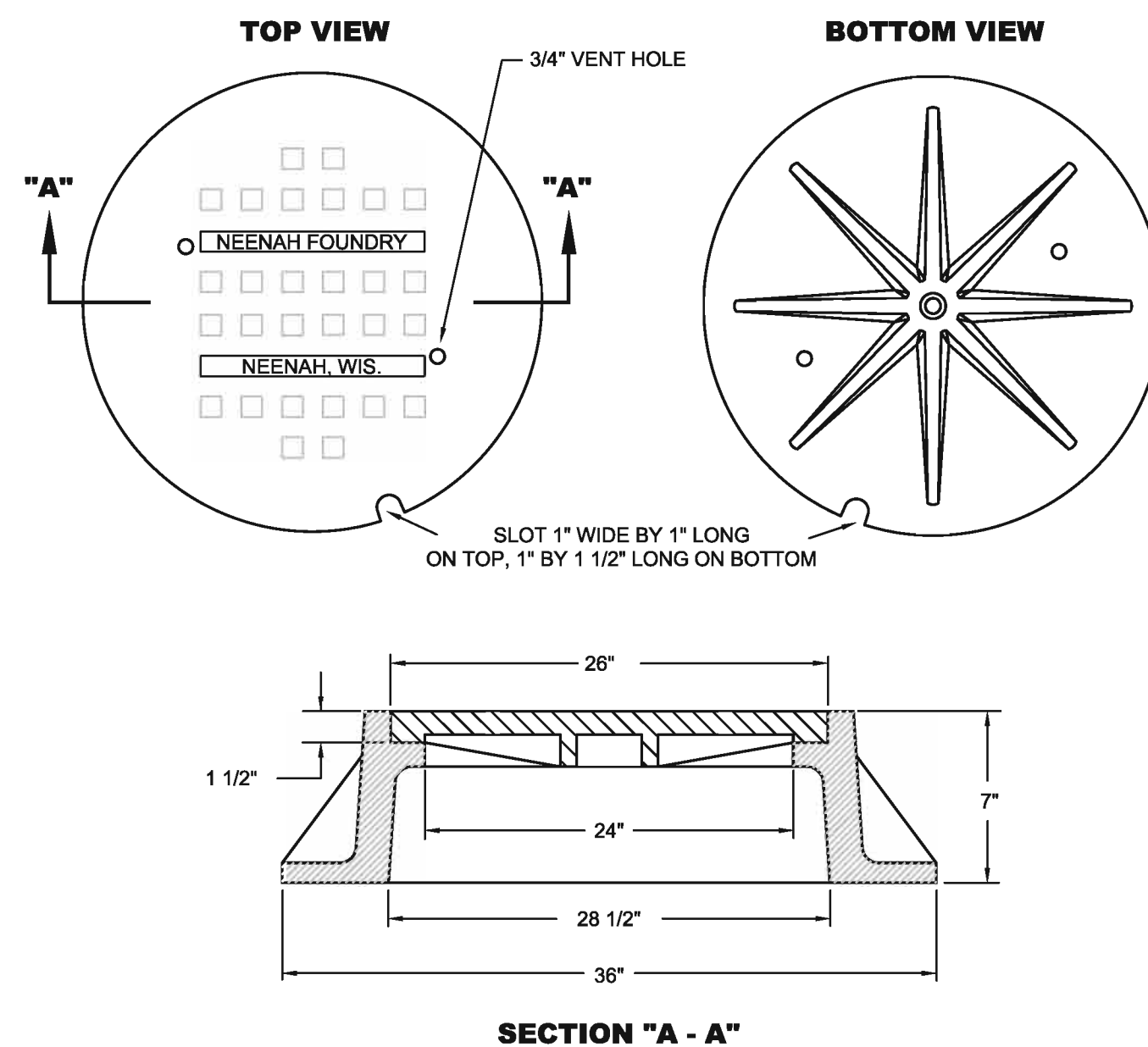
CITY OF SAN LUIS
JUAN SANCHEZ BLVD LIFT STATION
DETAILS



DATE:	AUG 2016
SURVEYED BY:	M.A.C.
DRAWN BY:	J.M.G.
DESIGNED BY:	C.D.R.
CHECKED BY:	K.A.D.
PROJECT NO.:	13033
SHEET	DT-01

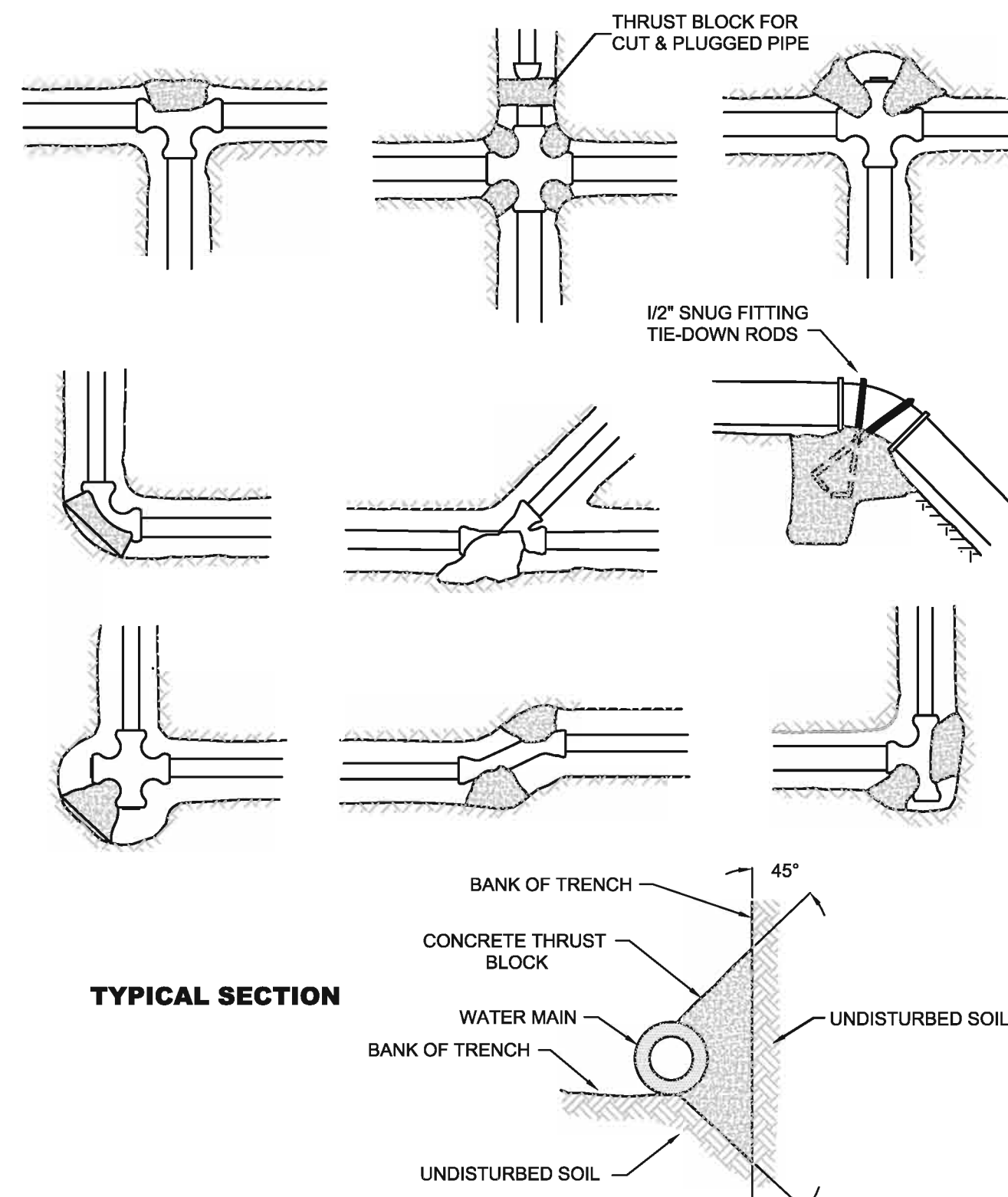


ADJUST MANHOLE TO FINAL GRADE **A**
NTS **DT-02**



- NOTES**
1. The top of the cover and frame shall be flush and there shall be 1/8" horizontal clearance all around the frame and cover.
 2. All covers shall have the letter "S" cast into it. The letter shall be raised 5/16" and be no less than 2 1/2" high.
 3. Covers shall have a minimum of two 3/4" vent holes. Should a manhole be located within 500 feet of an interceptor sewer the vent holes are to be eliminated.
 4. Standard manhole covers are the Neenah R-1595, R-1642 or approved equal.

MANHOLE COVER **B**
NTS **DT-02**



- NOTES**
1. See Standard Detail 5-100 for calculating safe bearing areas.
 2. All ferrous fittings, pipe, connectors and appurtenances shall receive a 10mil (minimum) polyethylene wrap to prevent direct contact with the soil.
 3. Thrust blocks shall consist of Class "B" concrete.
 4. Concrete shall not come in direct contact with pipe.
 5. 3/16" stainless steel tie-down rods required for pipe larger than 8".
 6. Place a minimum of 8" concrete under all fittings.

THRUST BLOCK INSTALLATION **C**
NTS **DT-02**

THRUST AT FITTINGS IN POUNDS
AT 150 POUNDS PER SQUARE INCH OF WATER PRESSURE
ALL PIPE & FITTINGS SHALL BE CLASS 150 (MINIMUM)

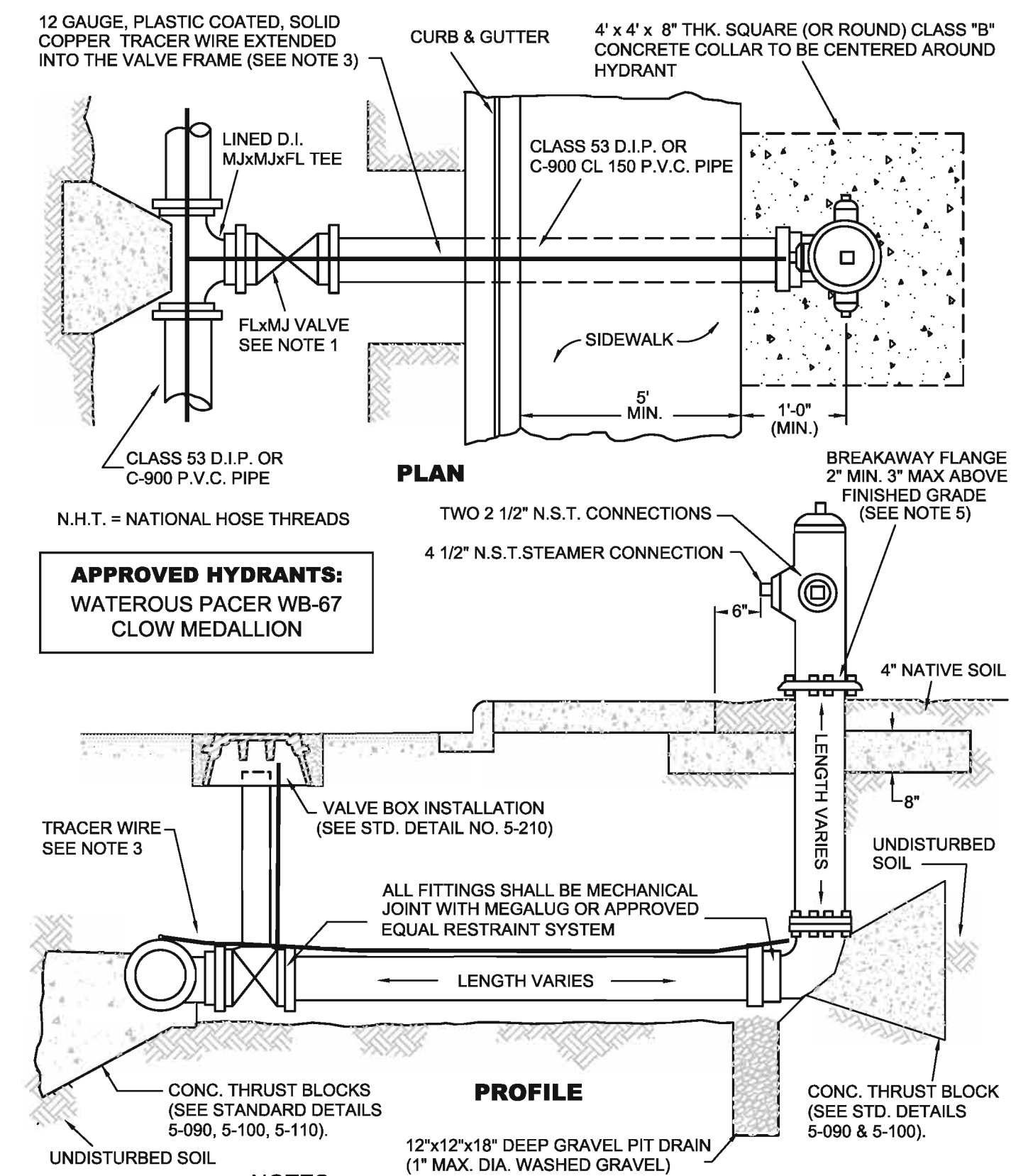
Size	Tee's & Dead Ends	90° Bend	45° Bend	22 1/2° Bend	Per Degrees of Deflection
2"	1,740	2,460	1,335	675	30.3
4"	2,715	3,840	2,085	1,065	47.3
6"	5,625	7,950	4,320	2,190	98.3
8"	9,780	13,800	7,500	3,795	171.0
10"	16,050	22,650	12,300	6,225	280.5
12"	22,800	32,250	17,550	8,850	399.0
14"	31,050	42,300	23,850	12,075	543.0
16"	40,200	57,000	30,750	15,600	705.0

Soil	Safe Bearing Load Pounds Per Square Inch
MUCK, PEAT, ETC.	0
SOFT CLAY	1000
SAND	2000
SAND & GRAVEL	3000
SAND & GRAVEL CEMENTED WITH CLAY	4000

TO CALCULATE THE NEEDED AREA OF A THRUST BLOCK
Divide thrust by safe bearing load. Note: Thrust block area for 6" and larger pipe shall not be less than three (3) square feet in size.

- NOTES**
1. All domestic pipe and fittings shall be Class 150 (minimum) unless otherwise noted.
 2. All private fire suppression pipe shall have a minimum class of 150 (P.S.I.).
 3. Thrust block area will be determined by soil tests for pipe greater in size than 16".
 4. Concrete shall not come in direct contact with pipe.

THRUST BLOCK DATA **D**
NTS **DT-02**



- NOTES**
1. 4" through 12" gate valves shall be American Darling resilient wedge 80 CSR, Watrous Series 500 resilient wedge, American AVK resilient wedge or Clow resilient wedge.
 2. All buried ductile iron pipe must be wrapped with 10mil (minimum) polyethylene plastic wrap.
 3. Tracer wire required on line from water main to hydrant.
 4. No break-away flange bolts may make contact with soil.
 5. Utilize a MJ Gradlock or offset to obtain measurement.

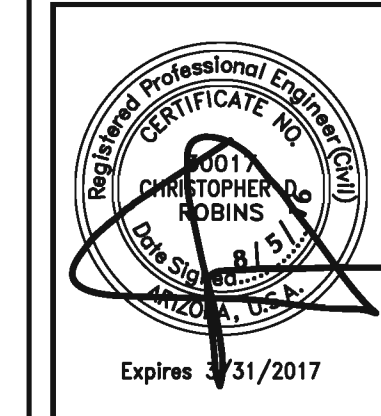
FIRE HYDRANTS **E**
NTS **DT-02**

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DATE:

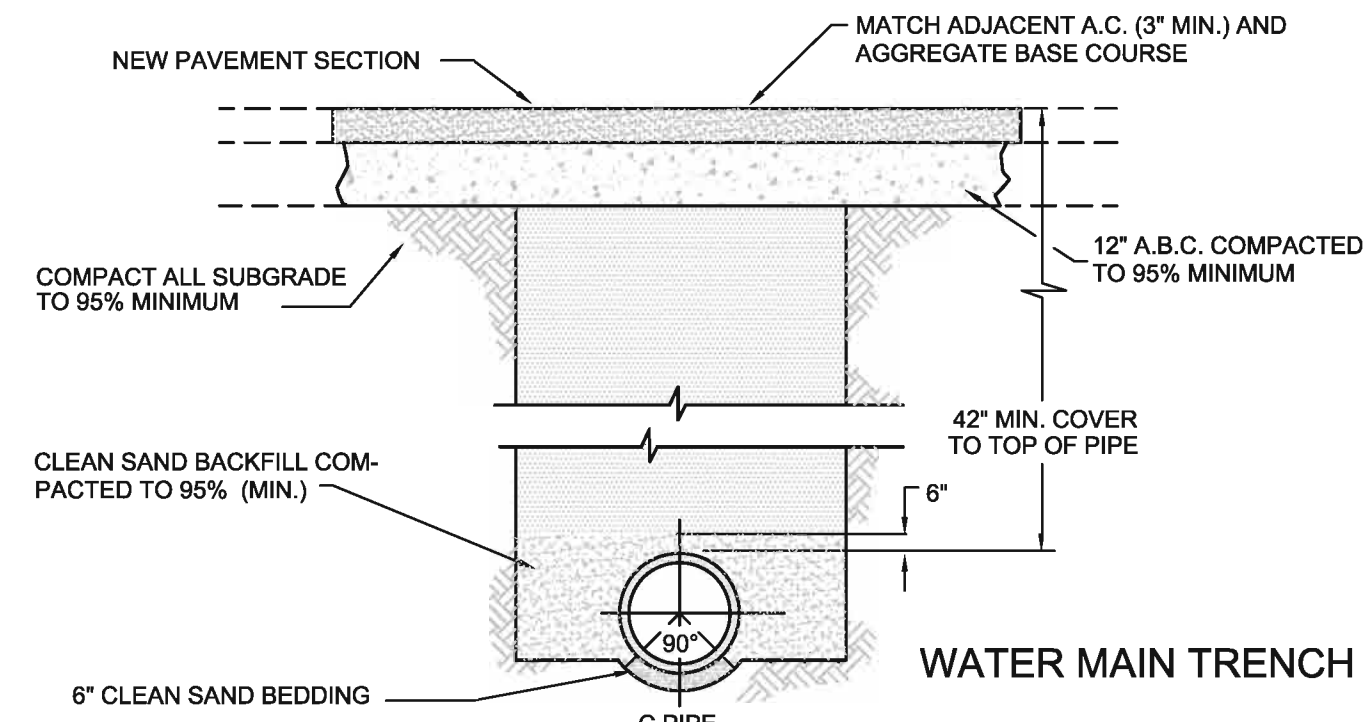
1500 S. 5th Avenue
Tulsa, AZ 85304
Phone: (928) 810-0825
Fax: (928) 810-0826
www.dahlrobins.com

DAHL, ROBINS & ASSOCIATES, INC.

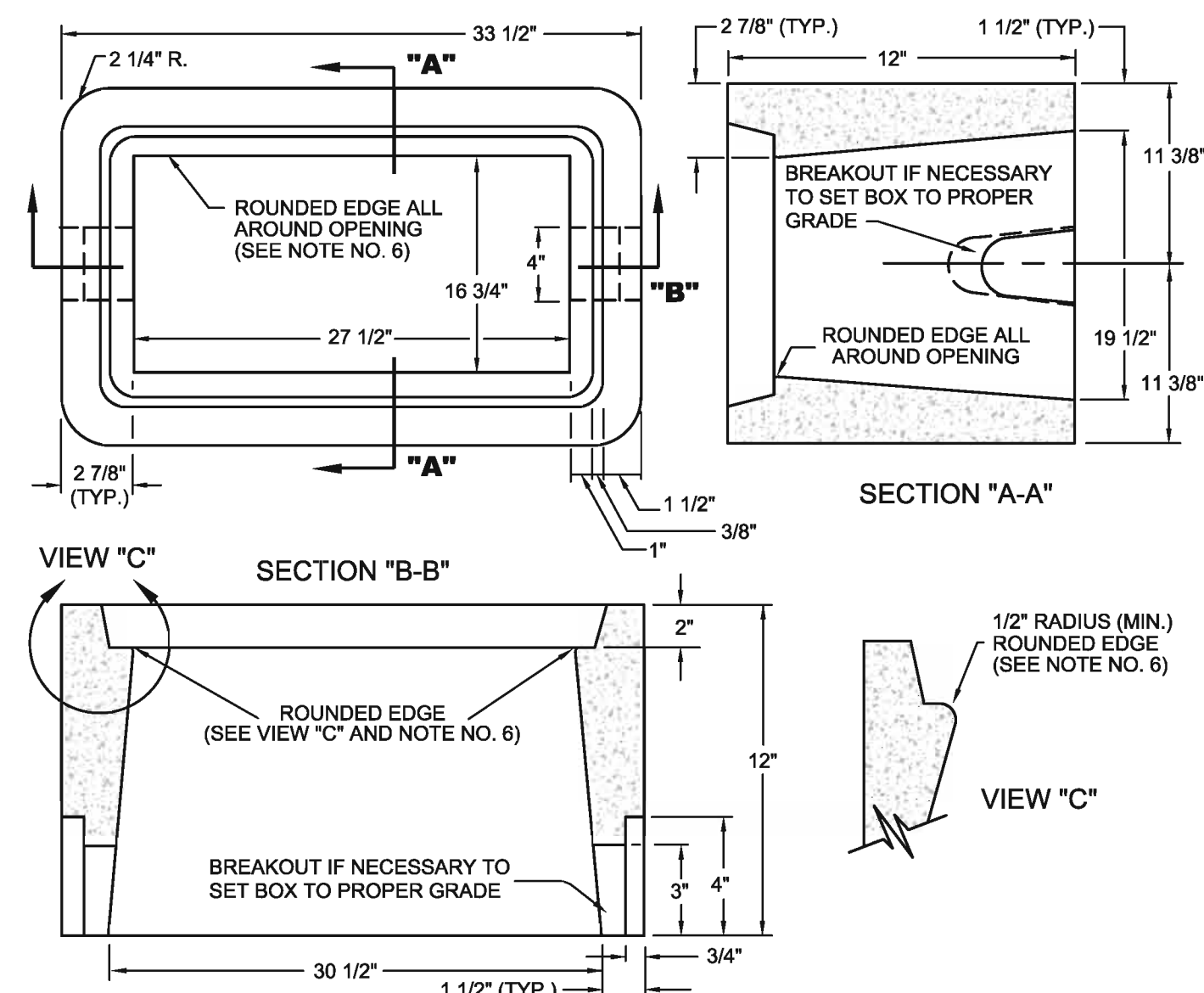
CITY OF SAN LUIS
JUAN SANCHEZ BLVD LIFT STATION
DETAILS



DATE: AUG 2016
SURVEYED BY: M.A.C.
DRAWN BY: J.M.G.
DESIGNED BY: C.D.R.
CHECKED BY: K.A.D.
PROJECT NO.: 13033
SHEET



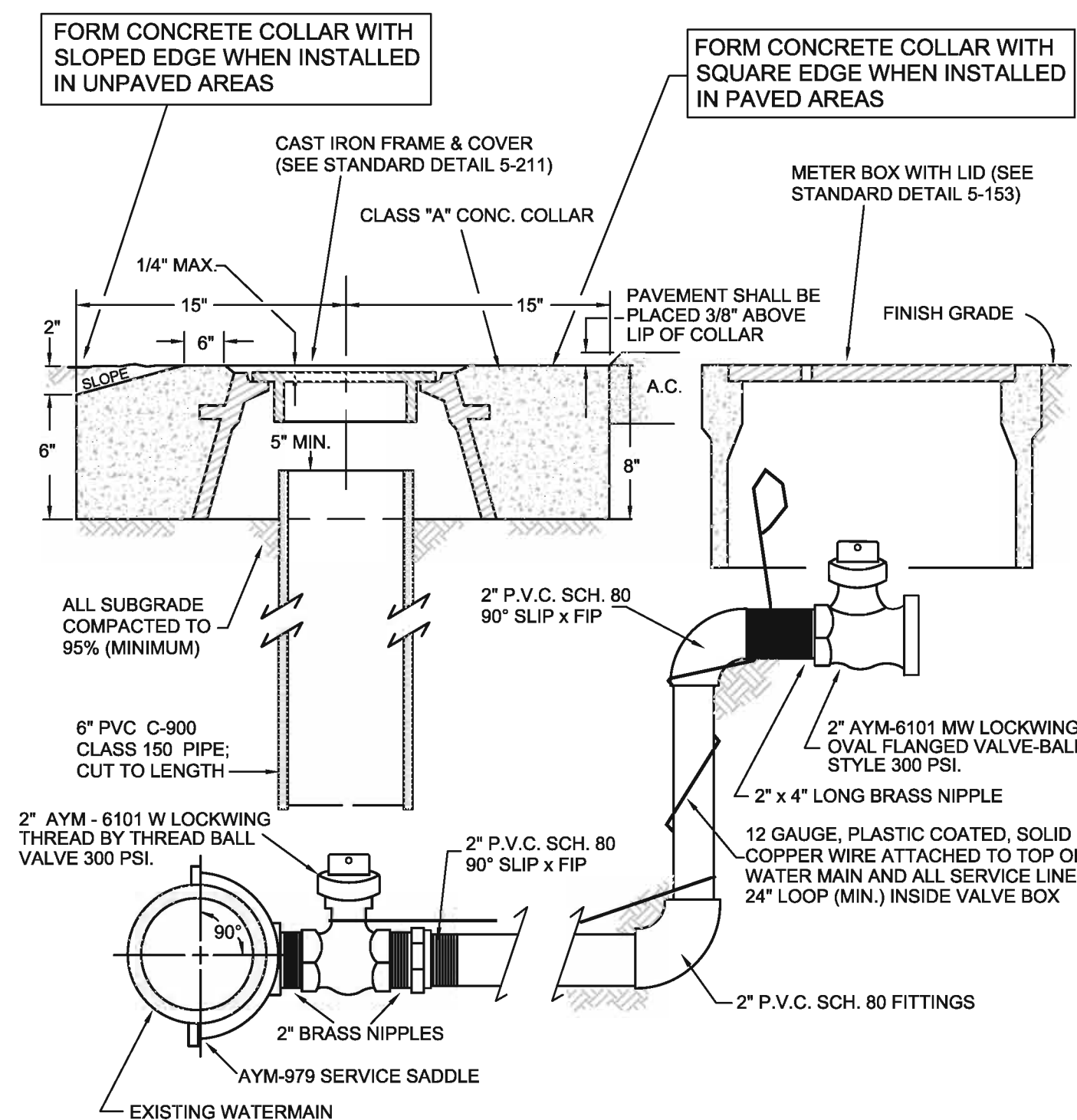
TRENCH A
NTS **DT-03**



NOTES

- The meter boxes shall conform to the dimensions of the above drawing and shall be made of Portland cement concrete poured and tamped (or vibrated) in true form.
- The Portland cement concrete shall be batched in the proper proportions by weight, water, cement, fine aggregate (A.S.T.M. C-33), and coarse aggregate (3/8" rock). This mix shall be designed to obtain a minimum of 4,000psi at 28 days when tested in accordance with A.S.T.M. C-39. This mix shall be poured at a slump not in excess of six inches (6").
- Upon the removal of the forms, the meter boxes shall be water cured for seven (7) days or sprayed with a membrane curing compound such as "Hunts Process" or approved equal.
- The method of sampling and testing of these boxes shall conform to A.S.T.M. C-129 and C-140, except that the minimum required strength shall be 4,000psi at 28 days.
- Meter box lids shall be cast iron and fit flush with top of box and have adequate bearing on seat. When water meter boxes are used in paved areas, subject to vehicular traffic, a traffic rated lid will be used.
- The San Diego Precast Concrete, Inc. model P 4 1/2 water meter box with cast iron lid or equal is an approved model.
- Apply 1/2" radius (minimum) to edges of box opening in order to prevent worker injury when handling and installing boxes.
- Use composite meter boxes in residential subdivisions/ mobile home parks. The lids are to be precut with a 1.75" to 2.0" diameter hole to install automatic meter reading device.
- Meter boxes should not be installed in sidewalk unless directed by City Engineer.

WATER METER BOX C
NTS **DT-03**

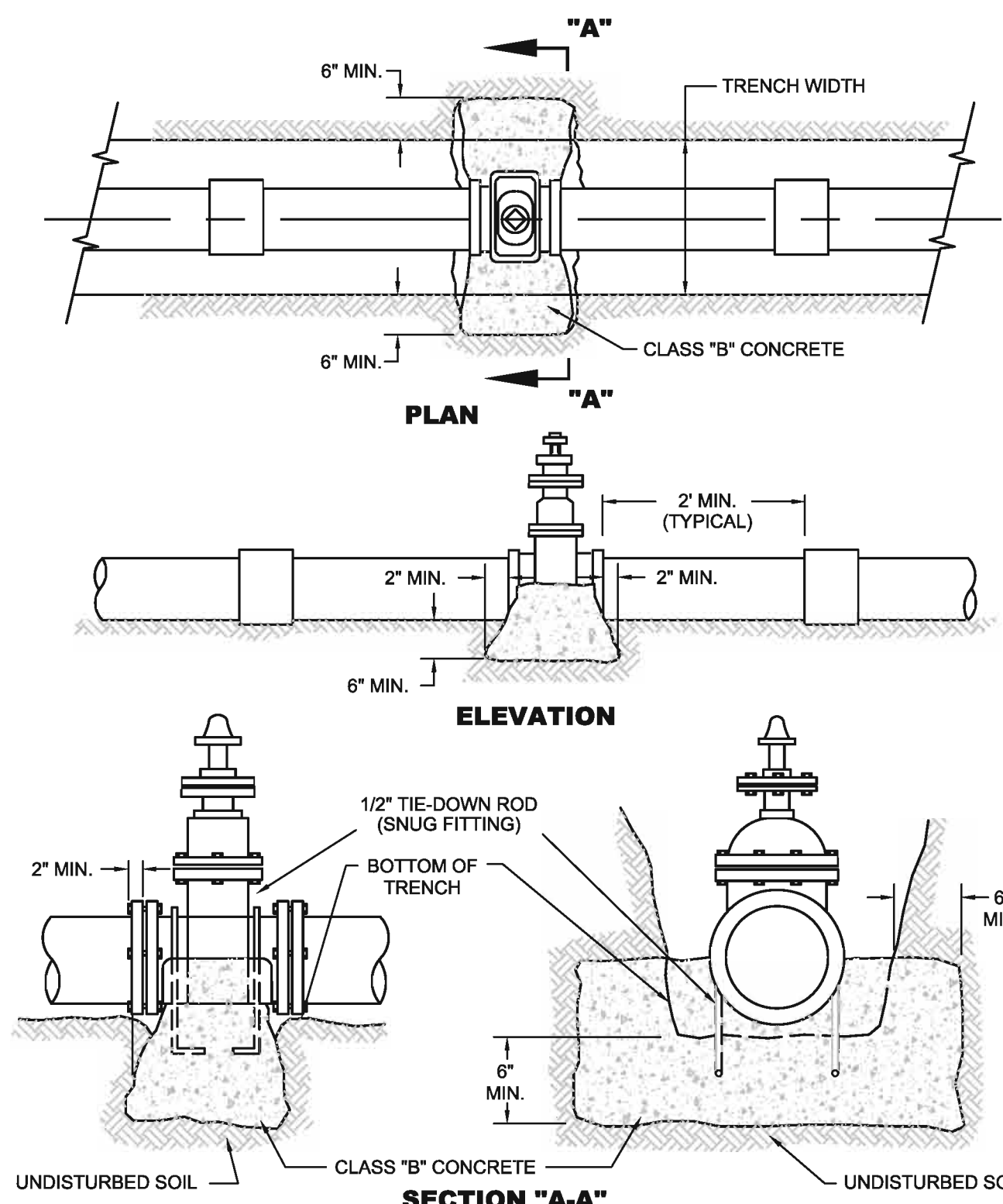


NOTE

- Tracer wire shall be required on all service lines between watermain and meter.
- Meter box to be set adjacent to the public right-of-way line.
- Water meter boxes that are subject to vehicular traffic must include a traffic rated cast iron lid.
- Meter boxes are not to be located within sidewalks.
- Do not bend or crimp water service line. Use 45° bends and/or appropriate fittings.
- On multiple 2" services, saddles shall be at least 24" clear (minimum) of each other.
- All new water service requests 2" and smaller off of an existing water main will be installed by City of Yuma utilities personnel.

NOTE: PIPE SHALL BE SCH. 40 MINIMUM. FITTINGS SHALL BE SCH. 80 MINIMUM.

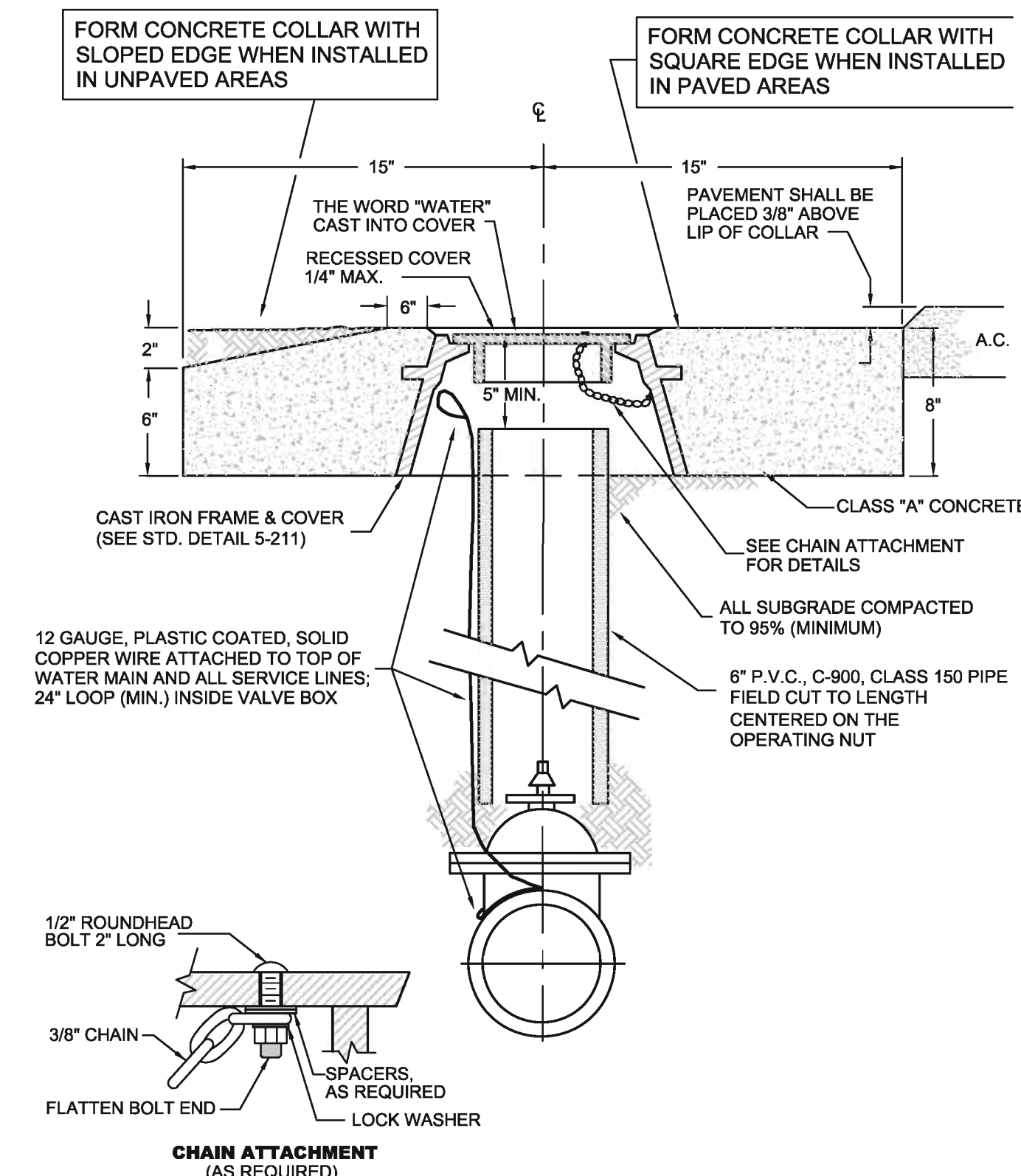
2" WATER SERVICE B
NTS **DT-03**



NOTES

- This detail covers water valves 4" or larger.
- All buried iron and ferrous fittings shall receive a 10mil (minimum) polyethylene plastic wrap to prevent direct contact with soil.
- Tie-down rods required for pipes larger than 8".
- Concrete shall not come into contact with water pipe.
- Refer to Standard Detail 5-101 for valves twenty inch (20") and larger.

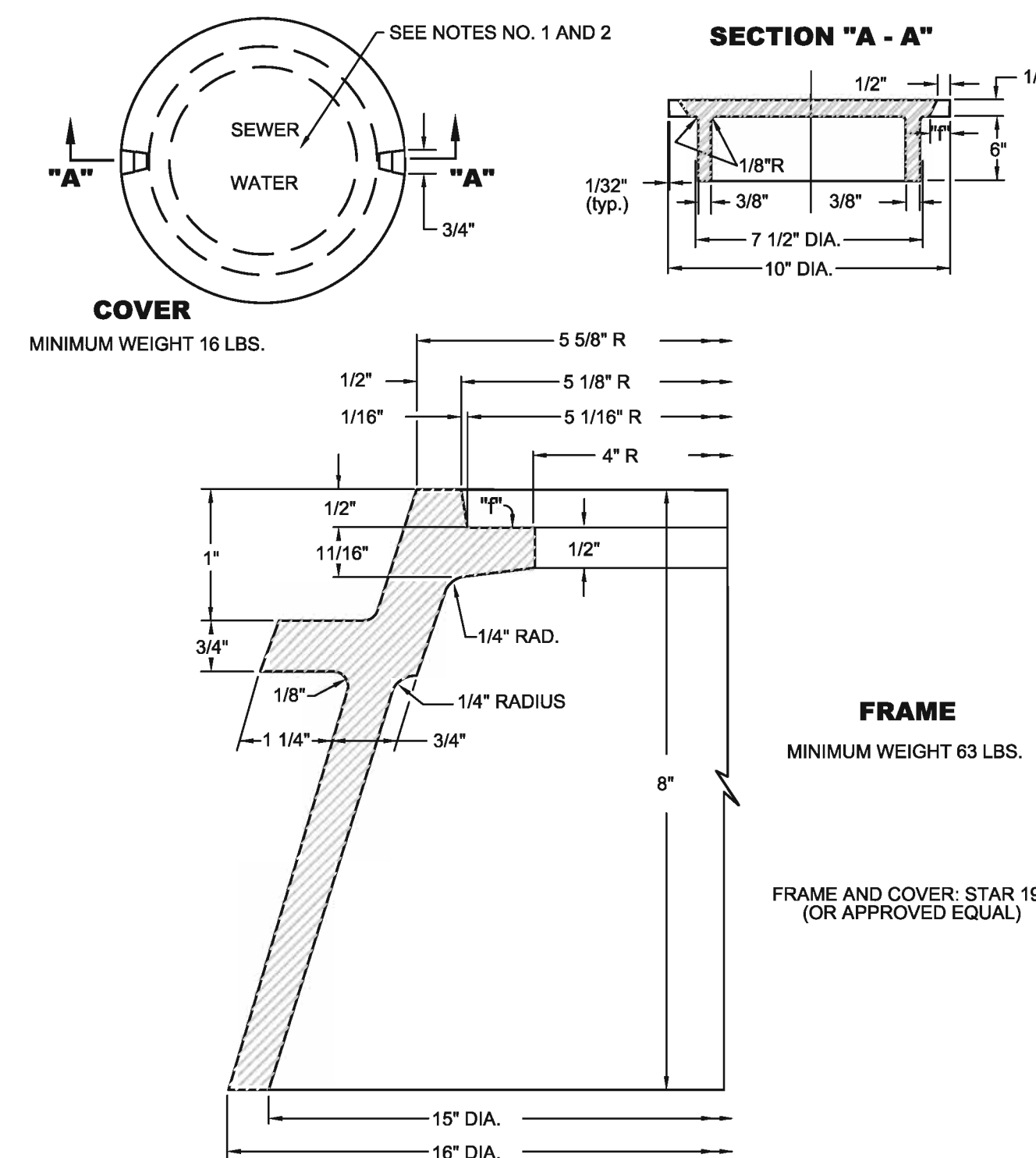
VALVE ANCHORS D
NTS **DT-03**



NOTE

- 12 gauge solid copper wire shall extend into the frame of each in-line valve, air release valve, blowoff, etc.

VALVE BOX INSTALLATION E
NTS **DT-03**



NOTES

- THE WORD "WATER" OR "SEWER" SHALL BE CAST ON THE COVER. LETTER SIZE: 5/8" x 3/4" RAISED 1/16" ABOVE LEVEL OF COVER.
- TYPE OF LETTERS ARE TO BE SUBMITTED FOR APPROVAL.

"M" INDICATES ORDINARY MACHINING TOLERANCE FOR MACHINE FINISH: ± 1/64"

8" CAST IRON FRAME AND COVER F
NTS **DT-03**

DRAWINGS ISSUE RECORD:
DATE:

1500 S. 5th Avenue
Yuma, AZ 85364
Phone: (928) 810-0826
www.dahlrobins.com

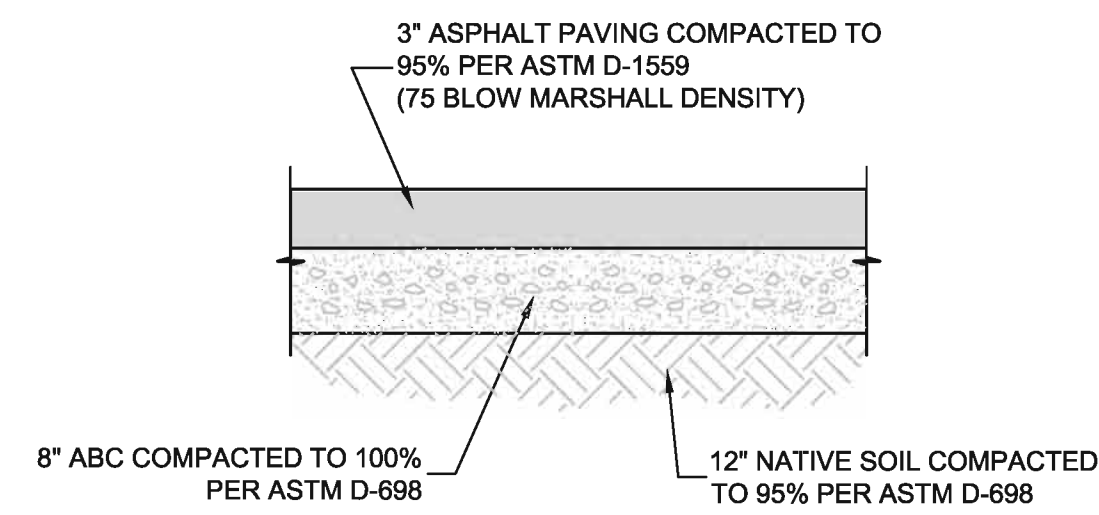
DAHL, ROBINS & ASSOCIATES, INC.

CITY OF SAN LUIS JUAN SANCHEZ BLVD LIFT STATION

DETAILS

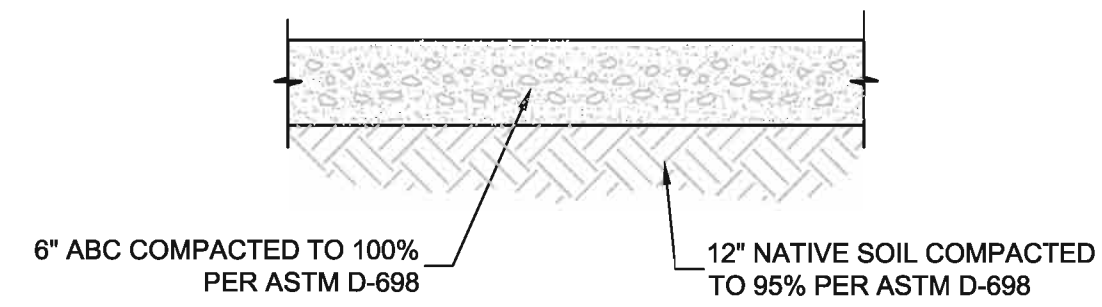
Professional Engineer
C. D. ROBINSON
No. 1000
Expires 1/31/2017

DATE:	AUG 2016
SURVEYED BY:	M.A.C.
DRAWN BY:	J.M.G.
DESIGNED BY:	C.D.R.
CHECKED BY:	K.A.D.
PROJECT NO.:	13033
SHEET	DT-03



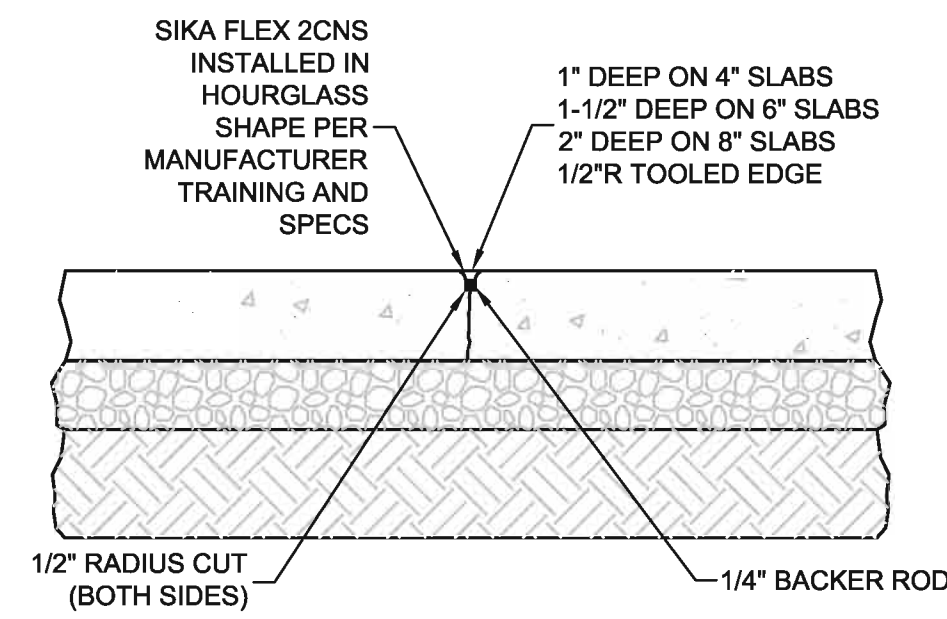
STRUCTURAL SECTION NO. 1

NTS **A**
DT-04



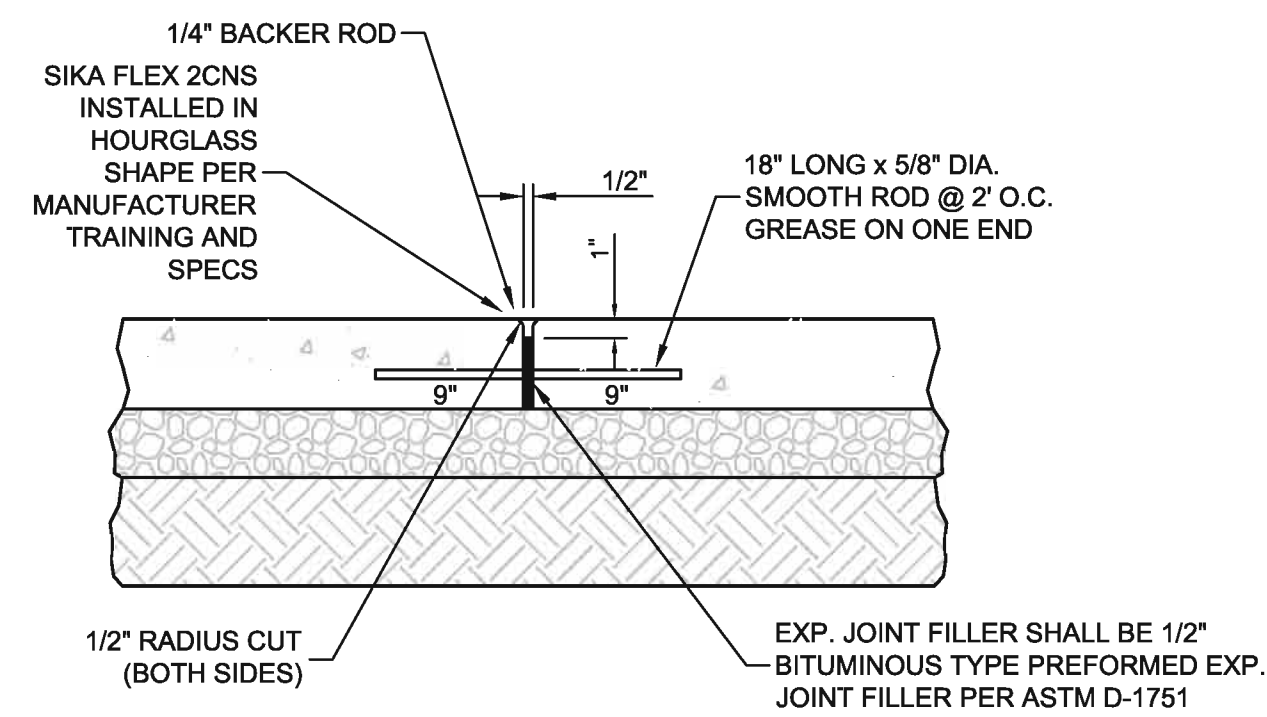
STRUCTURAL SECTION NO. 3

NTS **C**
DT-04



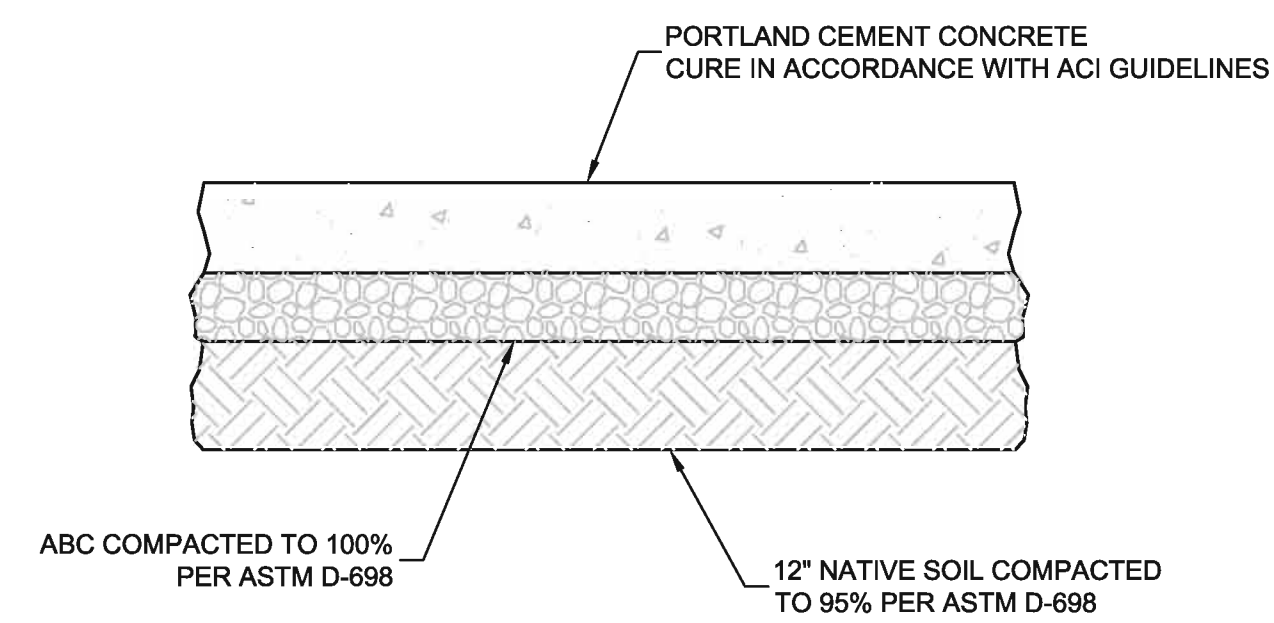
TYPICAL CONTROL JOINT

NTS



TYPICAL EXPANSION JOINT

NTS



STRUCTURAL SECTION NO. 2

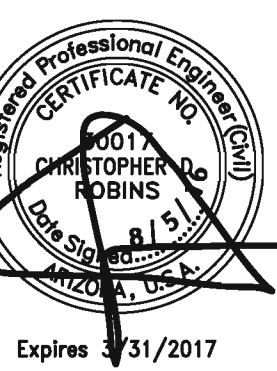
NTS **B**
DT-04

DATE:	
DRAWINGS ISSUE RECORD:	

1500 S. 5th Avenue
Tulsa, AZ 85304
Phone: (928) 812-0825
Fax: (928) 812-0826
www.dahlrobbins.com

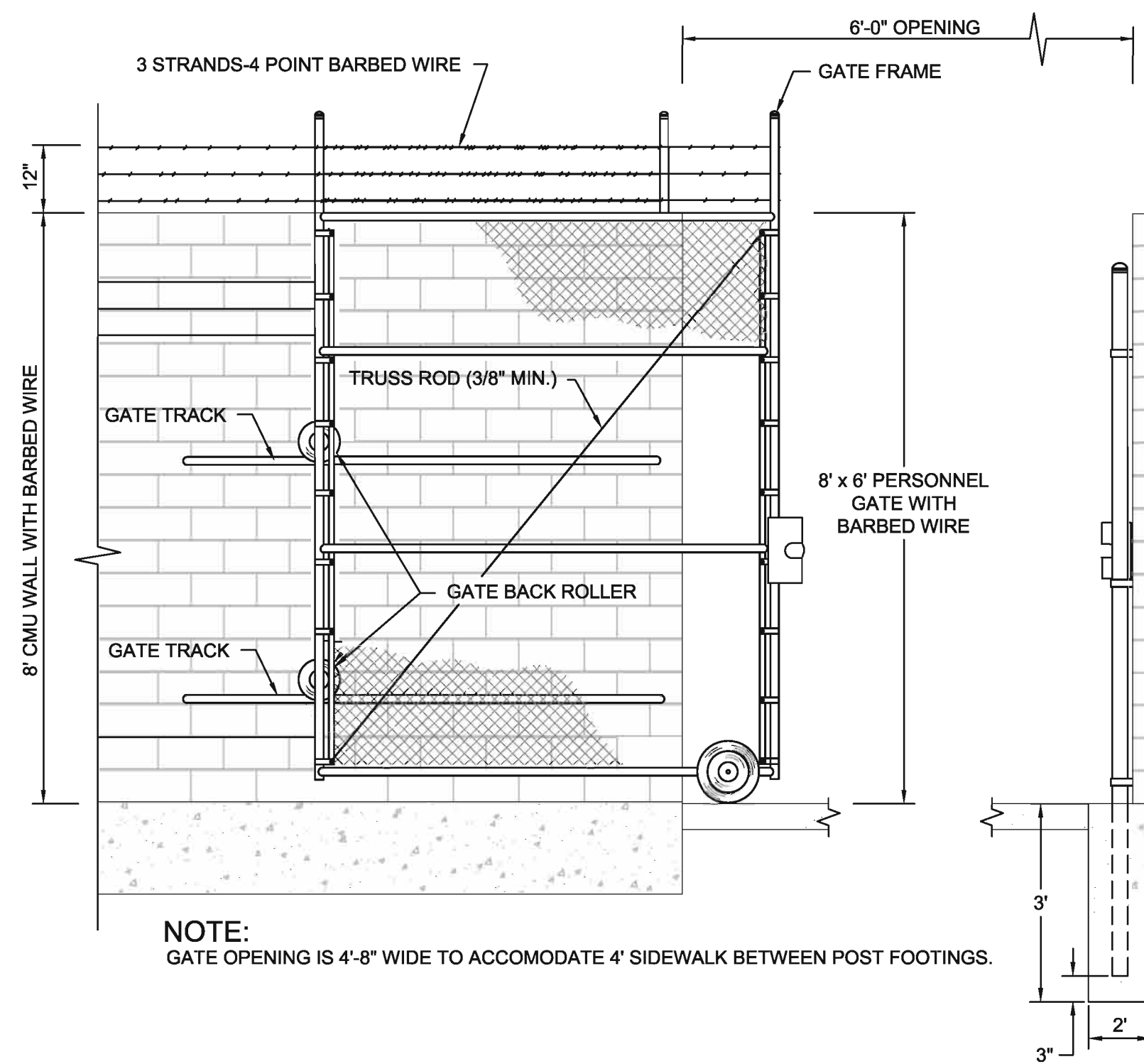
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**CITY OF SAN LUIS
JUAN SANCHEZ BLVD LIFT STATION
DETAILS**

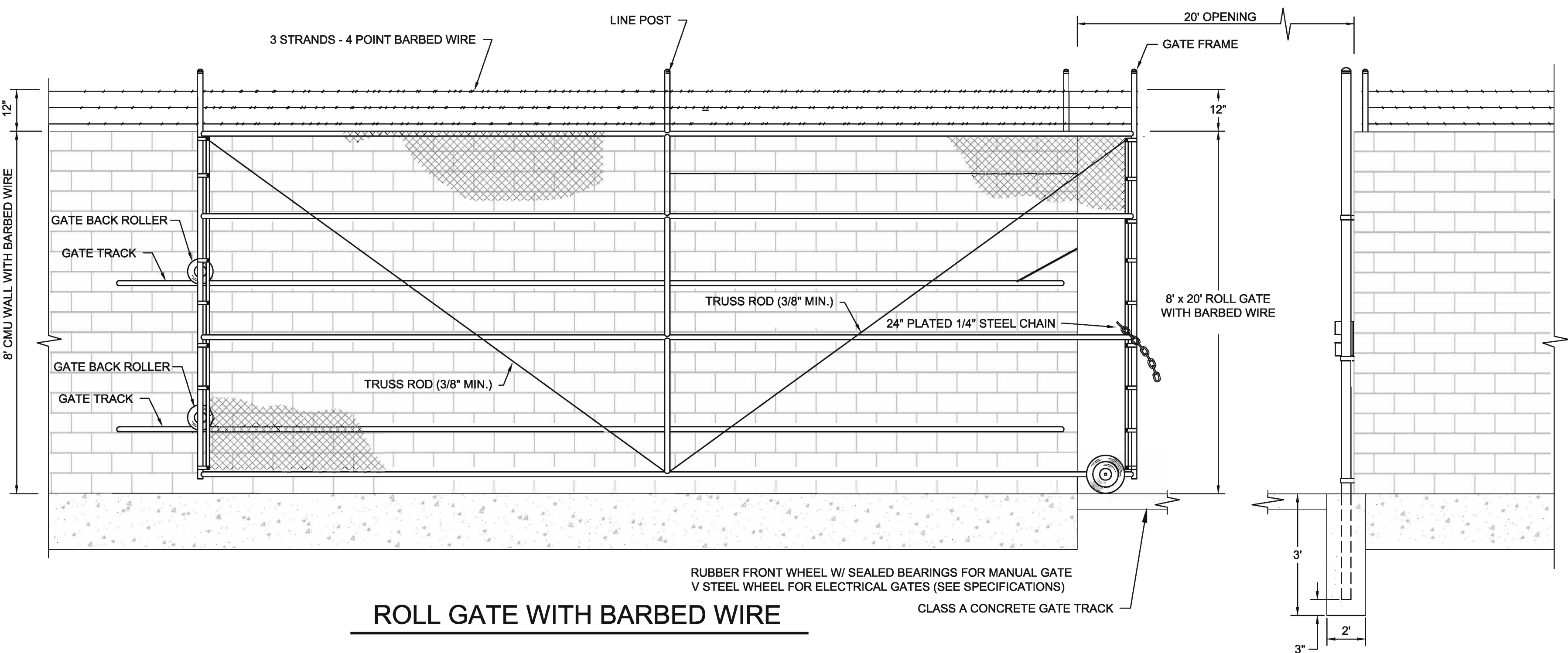


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NOTE:
GATE OPENING IS 4'-8" WIDE TO ACCOMMODATE 4' SIDEWALK BETWEEN POST FOOTINGS.



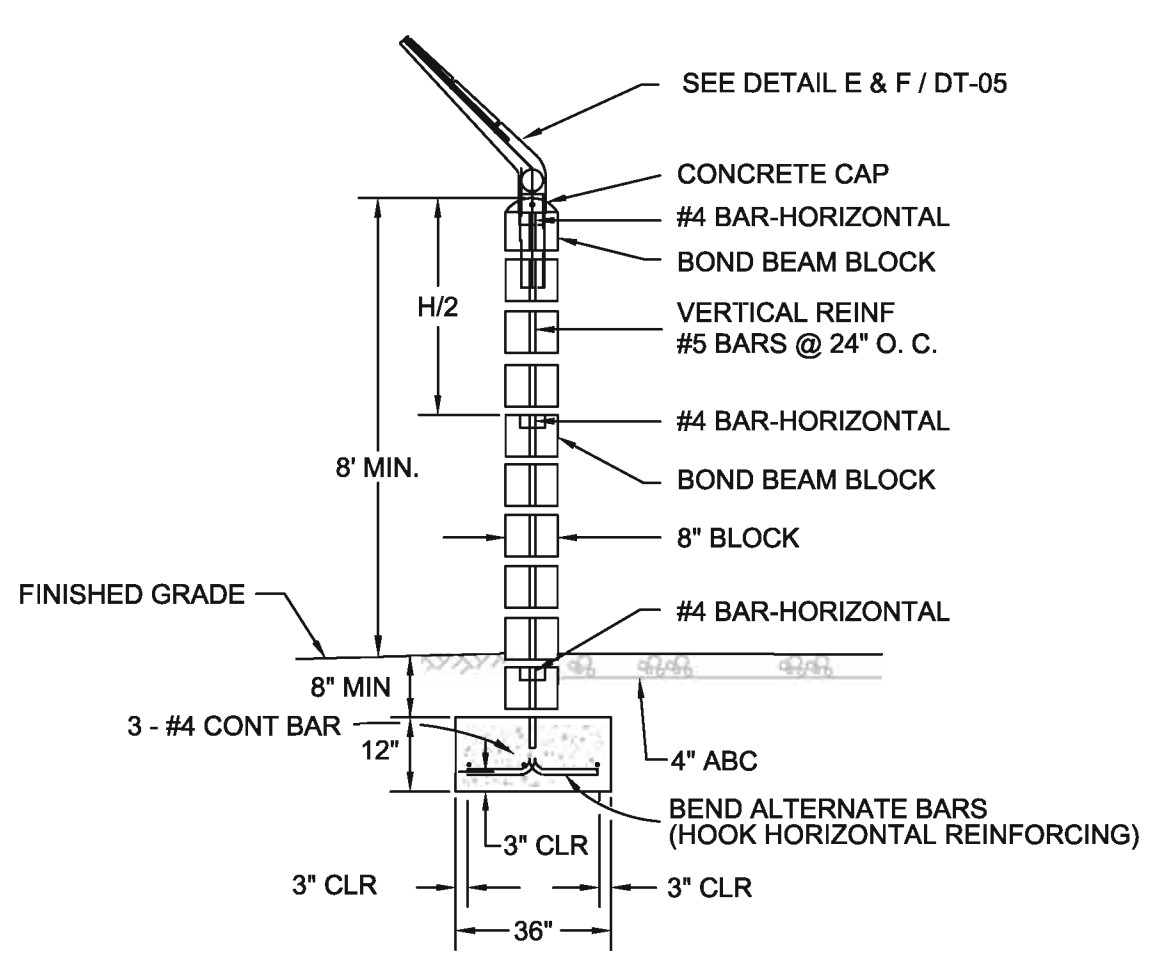
RUBBER FRONT WHEEL W/ SEALED BEARINGS FOR MANUAL GATE
V STEEL WHEEL FOR ELECTRICAL GATES (SEE SPECIFICATIONS)
CLASS A CONCRETE GATE TRACK

ROLL GATE WITH BARBED WIRE

MATERIAL SPECIFICATIONS
LINE POST TO BE 1 1/2" I.D. END, CORNER AND PULL POST TO BE 2" I.D. MIN TENSION WIRE SHALL BE 7
G.A. PIPE BRACES TO BE 1 1/2" I.D. TRUSS ROD TO BE 3/8" DIAMETER TOP RAIL TO BE 1 1/4" IN SCH 40
BARBED WIRE TO BE 3 STRAND - 4 POINT

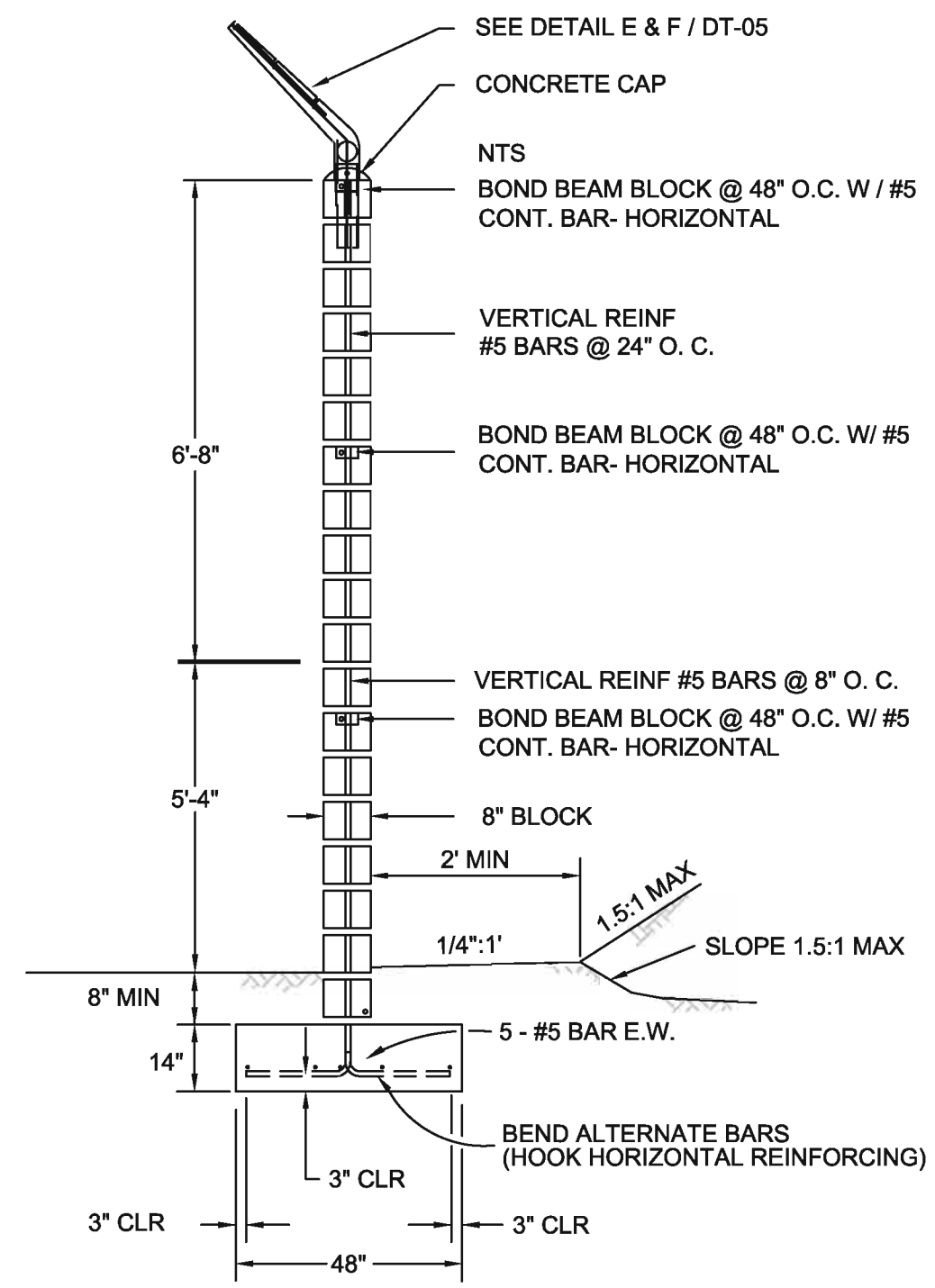
PERSONNEL ROLL GATE WITH BARBED WIRE **A**
DT-05

20' ROLL GATE AND 5' PERSONNEL ROLL GATE DETAIL **B**
DT-05



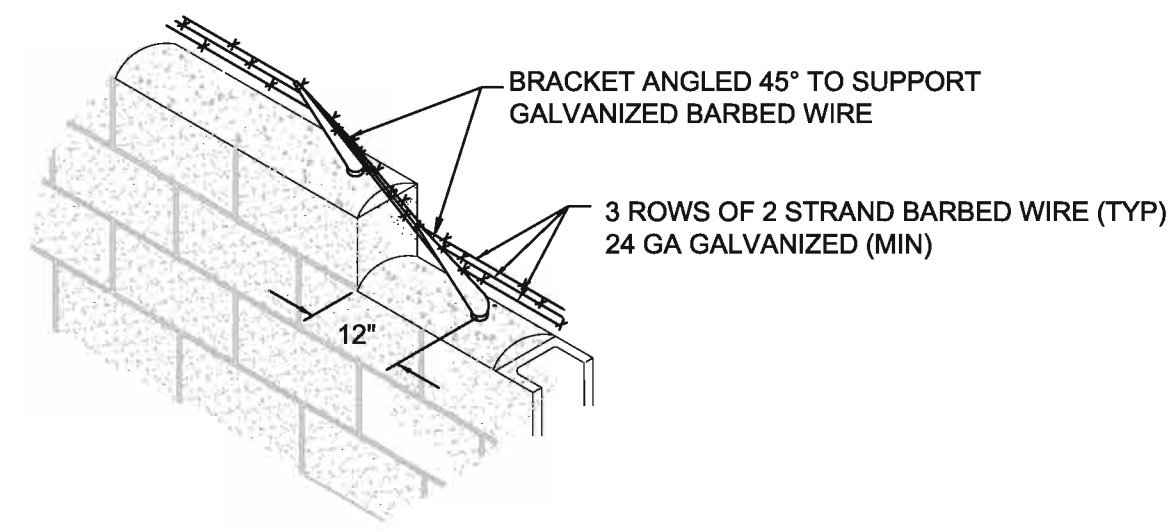
- NOTES**
- ALL BLOCKS BELOW GRADE AND VERTICAL CELLS CONTAINING REINFORCING STEEL SHALL BE FILLED WITH GROUT. IN ADDITION, ALL CELLS WITHOUT VERTICAL REINFORCING STEEL SHALL BE FILLED WITH GROUT TO TOP OF BOND BEAM AT MID HEIGHT OF WALL.
 - ALL WALLS SHALL BE PLUMB.
 - BACK FILL SHALL BE COMPACTED TO A MINIMUM OF 90%.
 - FOOTING SHALL BE CLASS B CONCRETE.
 - CONCRETE BLOCK SHALL BE SPLIT FACE TAN, GRADE A UNITS, CONFORMING TO ASTM DESIGNATION NO. C90.
 - REINFORCING STEEL, GROUT MORTAR, AND CLASS "B" CONCRETE SHALL CONFORM TO THE STANDARD SPECIFICATIONS.
 - ELIMINATE MORTAR IN ALL VERTICAL JOINTS IN FIRST COURSE ABOVE FINISH GRADE.
 - 1/2" OPEN EXPANSION JOINTS EXTENDING THROUGH THE FOOTING AND ENTIRE HEIGHT OF THE BLOCK WALL SHALL BE SPACED AT A MAXIMUM OF 50'.
 - HORIZONTAL STEEL SHALL EXTEND THROUGH EXPANSION JOINTS WHICH WILL BE DOWELED FOR MOVEMENT.

8' CONCRETE BLOCK WALL **C**
DT-05

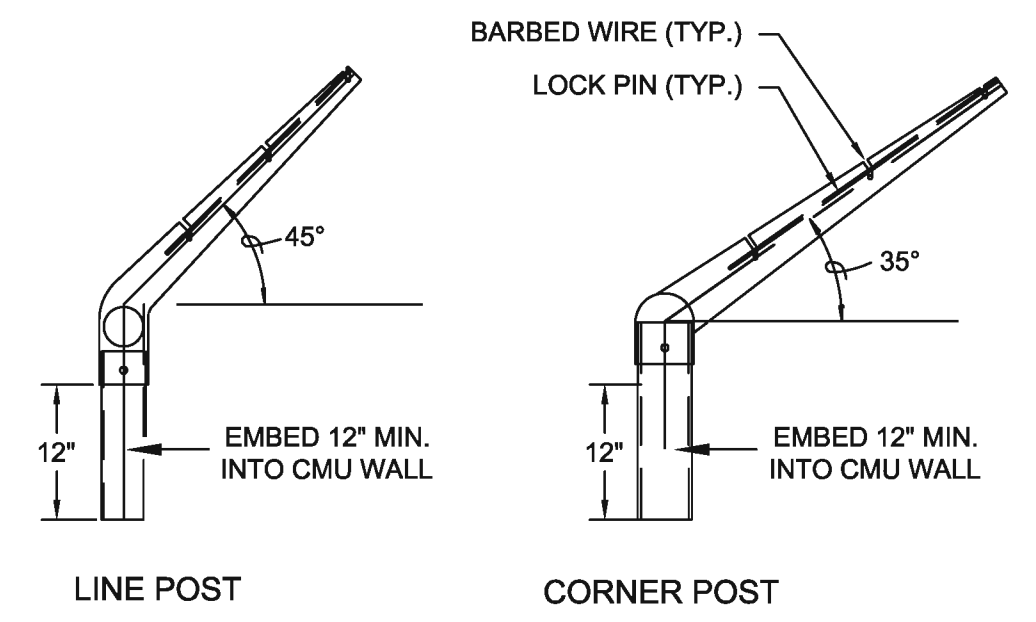


- NOTES**
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 - HORIZONTAL STEEL SHALL EXTEND THROUGH EXPANSION JOINTS WHICH WILL BE DOWELED FOR MOVEMENT.

12' CONCRETE BLOCK WALL **D**
DT-05



EXTENSION ARM AT STEP IN WALL **E**
DT-05



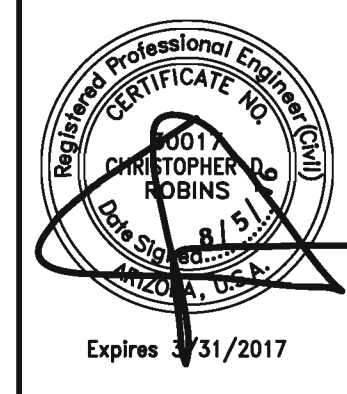
EXTENSION ARM DETAILS **F**
DT-05

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DATE:

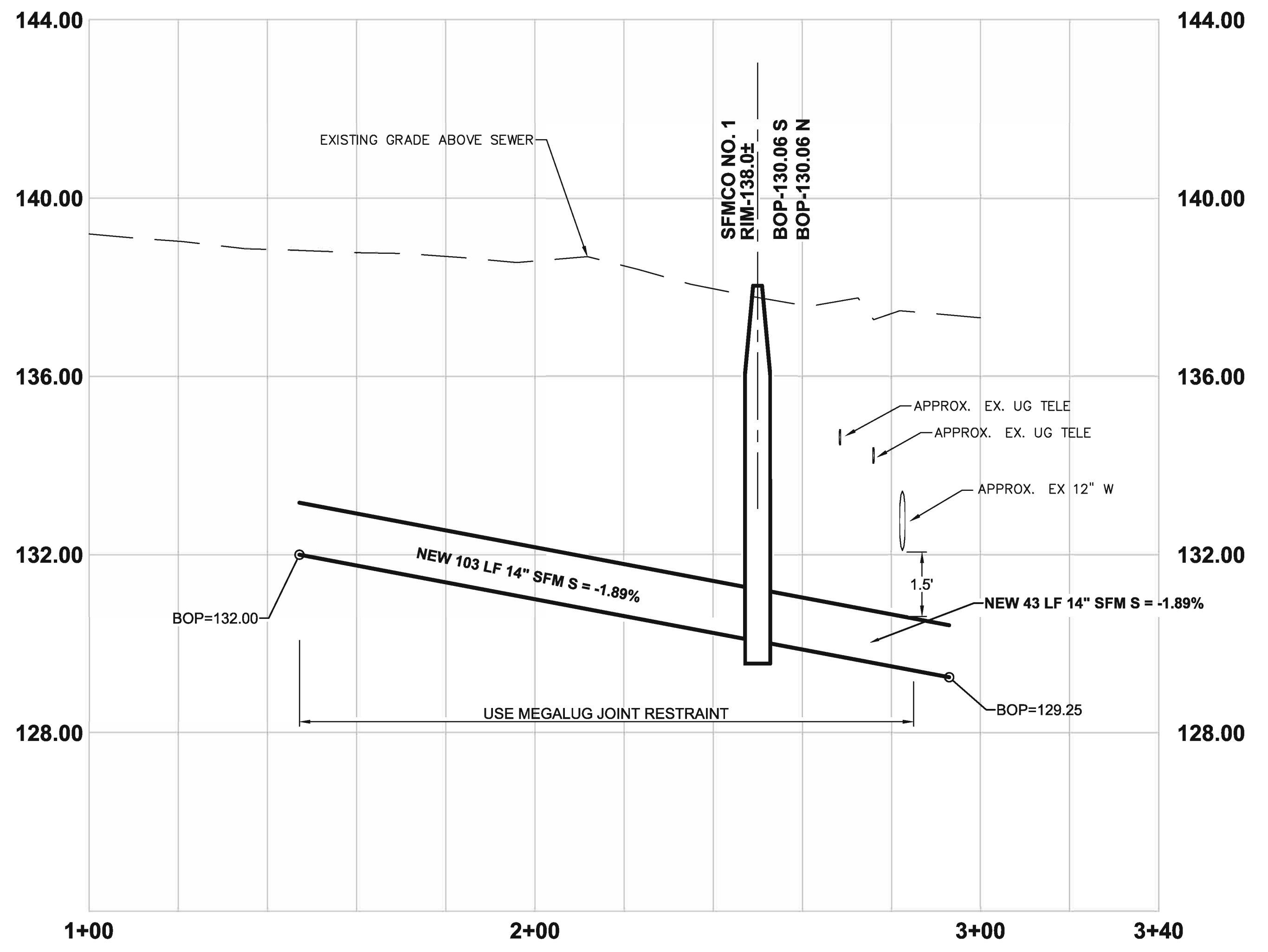
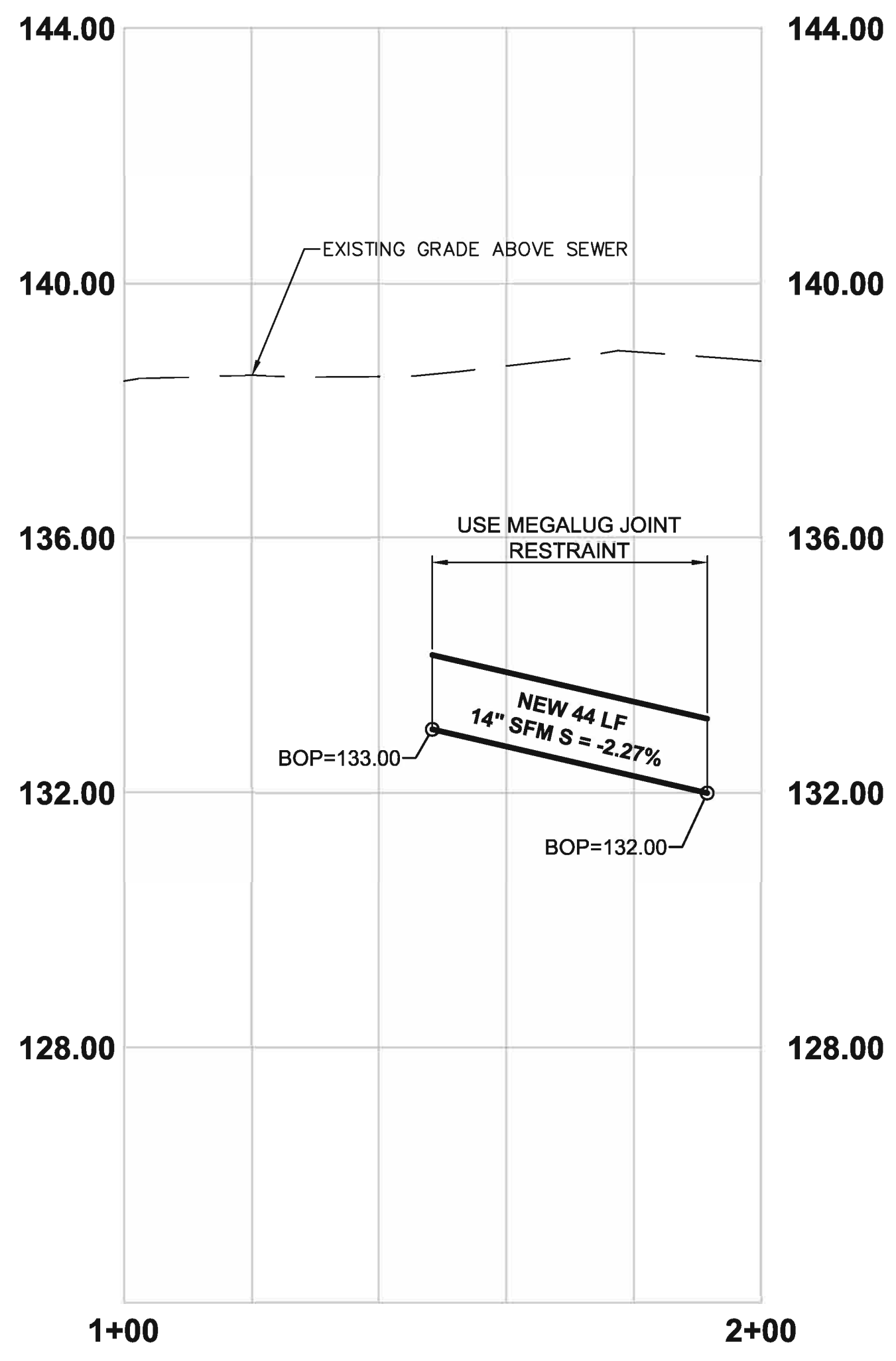
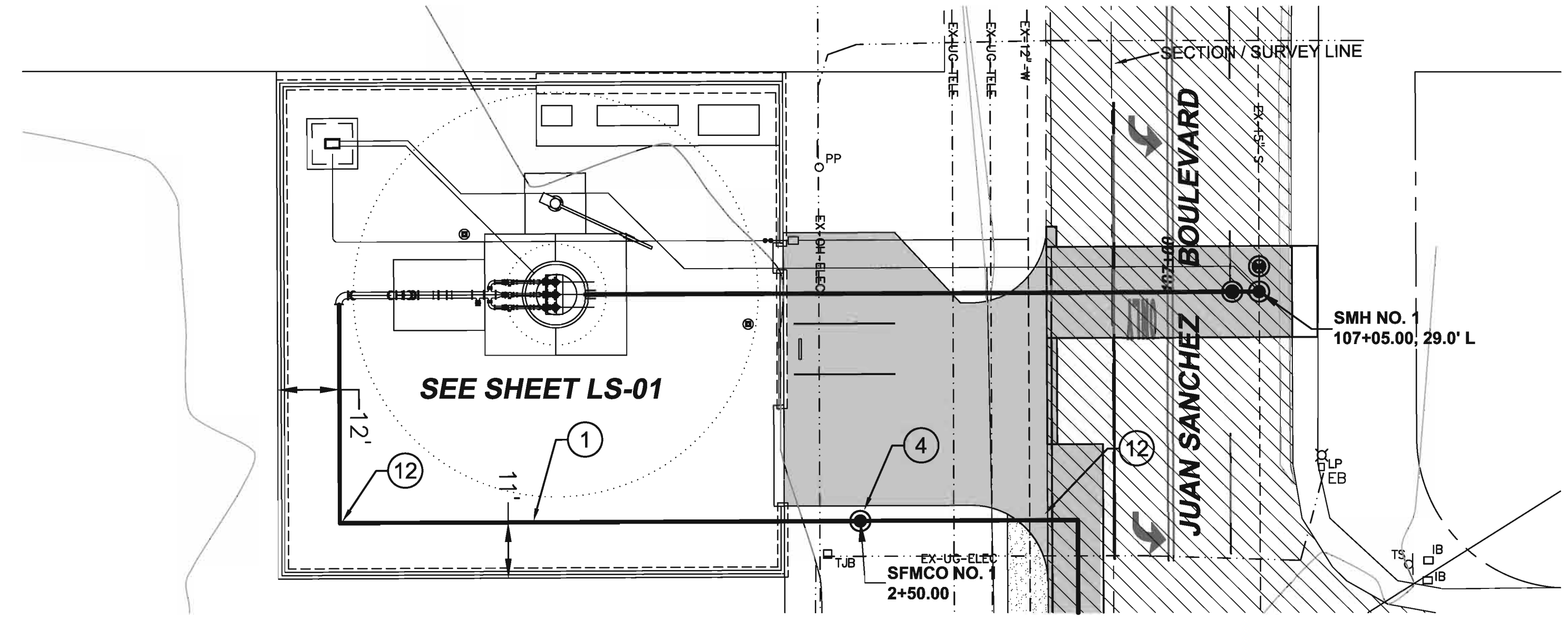
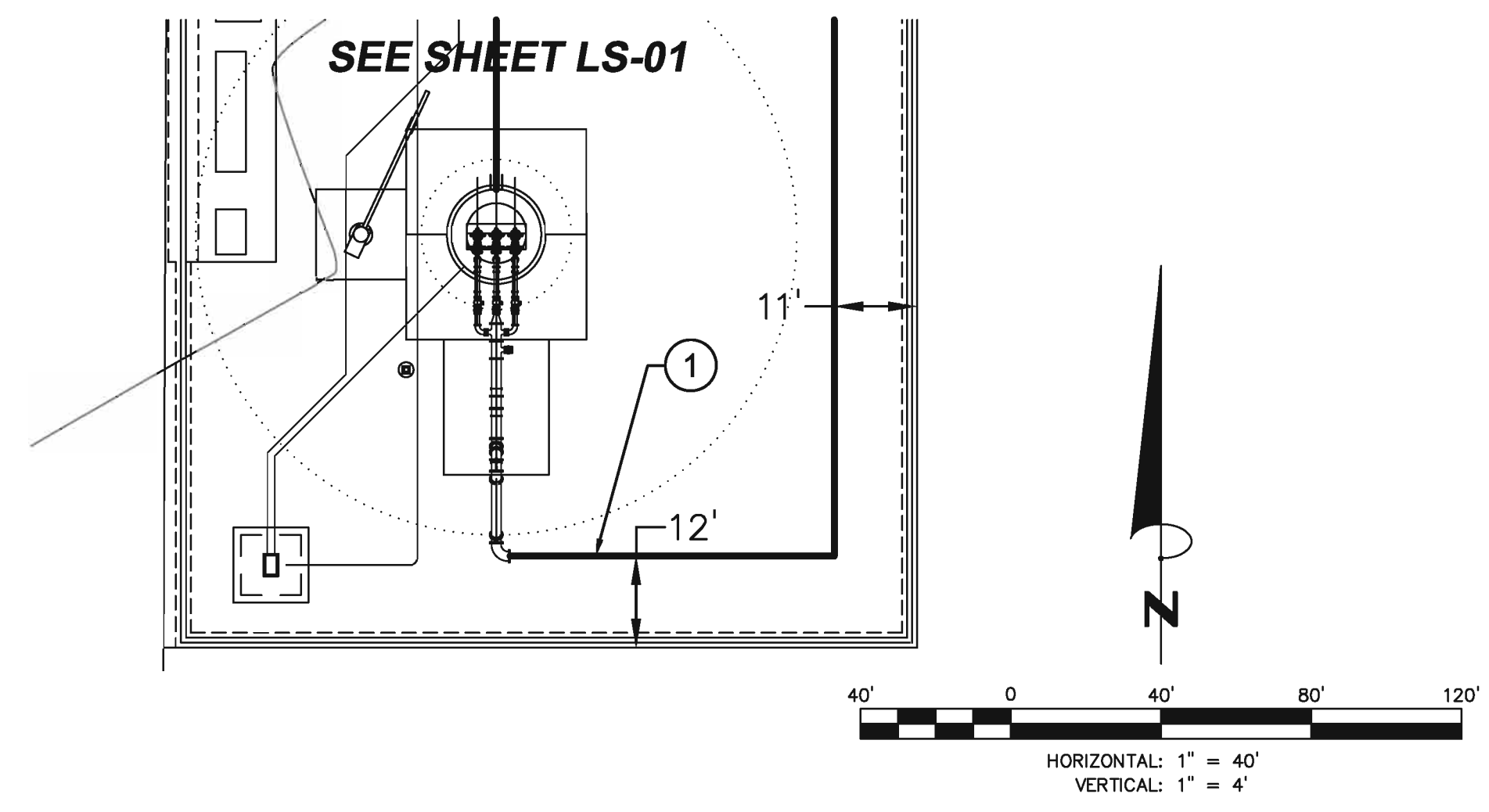
1500 S. 5th Avenue
Tulsa, AZ 85304
Phone: (928) 810-0825
Fax: (928) 810-0826
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DAHL, ROBINS & ASSOCIATES, INC.

CITY OF SAN LUIS
JUAN SANCHEZ BLVD LIFT STATION
DETAILS



DATE: AUG 2016
SURVEYED BY: M.A.C.
DRAWN BY: J.M.G.
DESIGNED BY: C.D.R.
CHECKED BY: K.A.D.
PROJECT NO.: 13033
SHEET



CONSTRUCTION NOTES			UNIT	QTY
1	14" CLASS 235 DR 18 PVC PIPE		LF	182
4	FORCE MAIN PRESSURE CLEANOUT		EA	1
12	14" 90° BEND LONG RADIUS - HORIZONTAL		EA	2

NOTE: INSTALL NEW STRIPING AND PAVEMENT MARKINGS AS REQUIRED

UTILITY DISCLAIMER

THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM THE FIELD SURVEY INFORMATION AND EXISTING DRAWINGS. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.



DRAWINGS ISSUE RECORD:

DATE:	
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1500 S. 5th Avenue
Tulsa, AZ 85304
Phone: (928) 810-0825
Fax: (928) 810-0826
www.dahlrobin.com

CITY OF SAN LUIS
JUAN SANCHEZ BLVD LIFT STATION
SEWER PLAN AND PROFILE
LIFT STATION TO JUAN SANCHEZ BLVD - STA 1+00 TO STA 3+00



DATE: AUG 2016

SURVEYED BY: M.A.C.

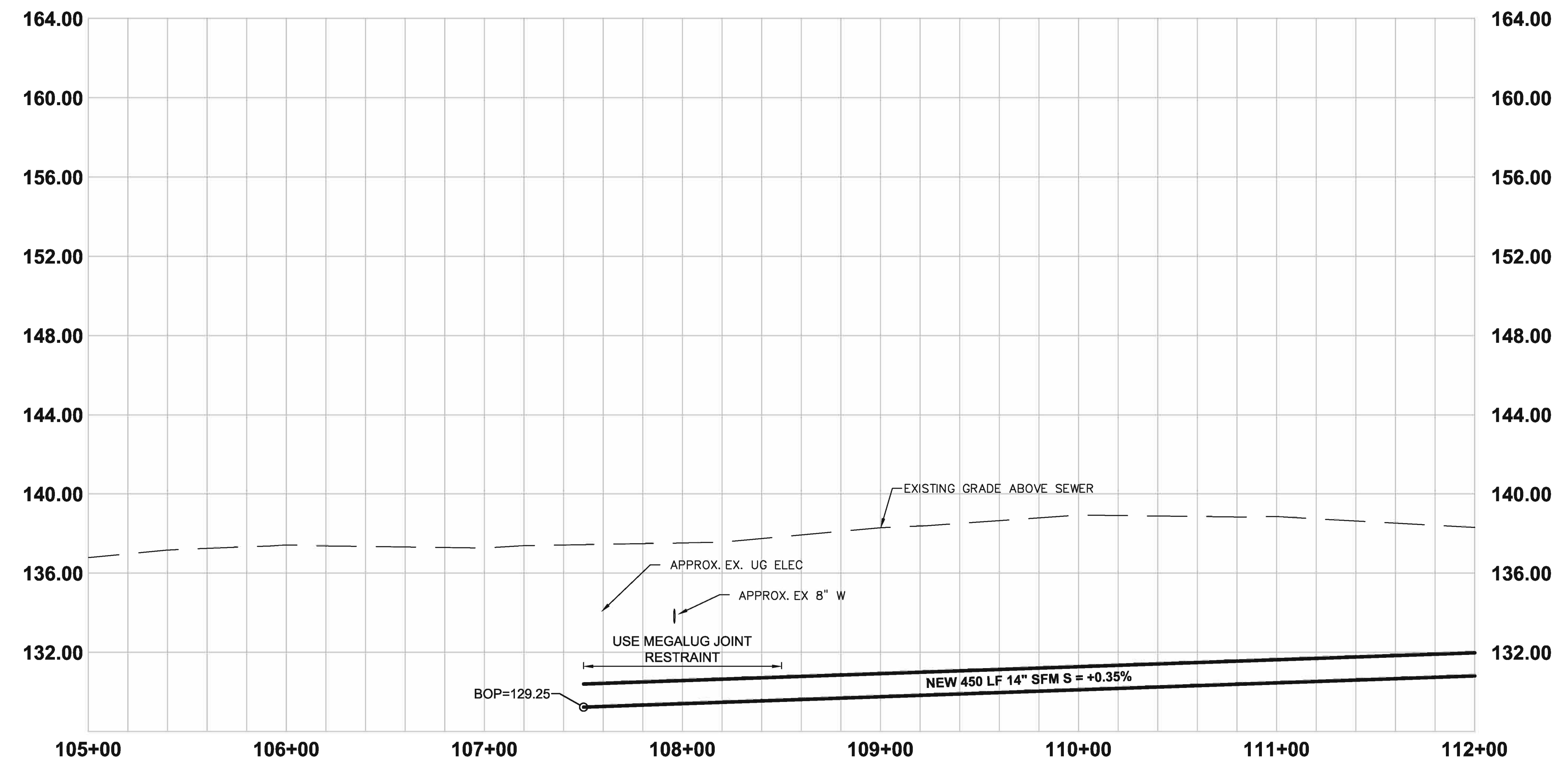
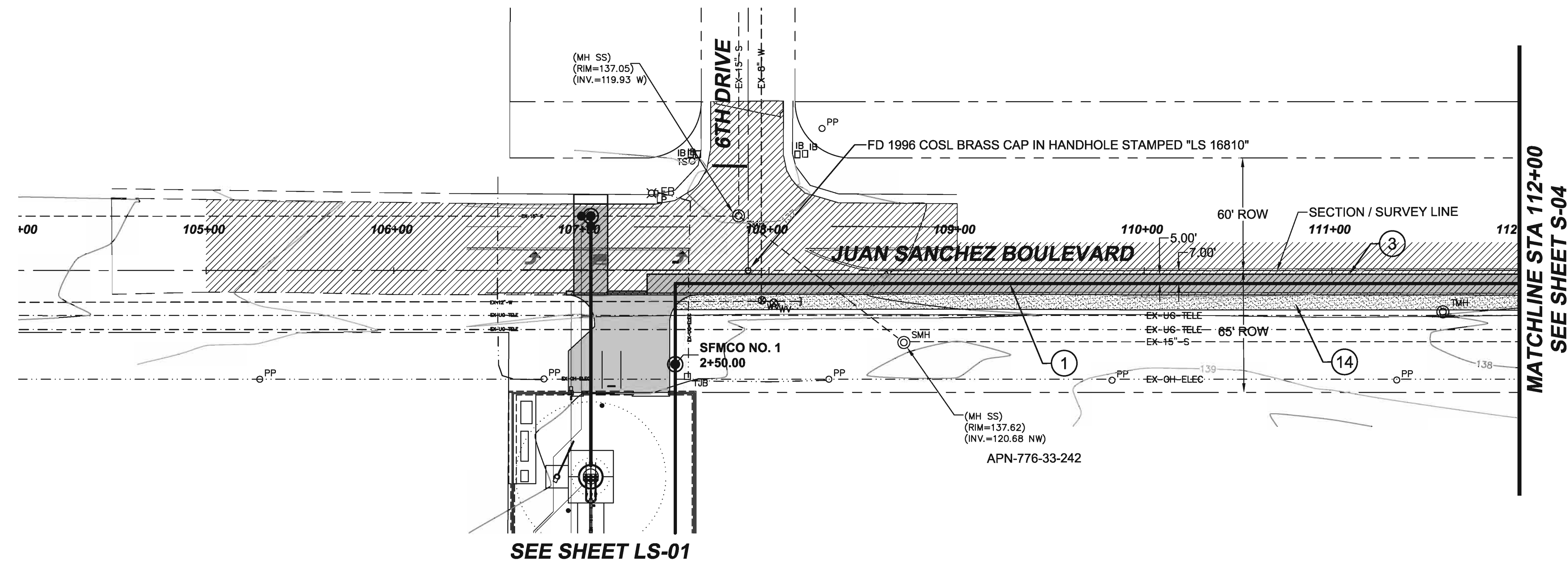
DRAWN BY: J.M.G.

DESIGNED BY: C.D.R.

CHECKED BY: K.A.D.

PROJECT NO.: 13033

SHEET



CONSTRUCTION NOTES			UNIT	QTY
1	14" CLASS 235 DR 18 PVC PIPE		LF	450
3	PAVEMENT REPLACEMENT - TYPE "B"		SY	564
14	8' WIDE 6" ABC SHOULDER		SY	398

NOTE: INSTALL NEW STRIPING AND PAVEMENT MARKINGS AS REQUIRED

UTILITY DISCLAIMER

THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM THE FIELD SURVEY INFORMATION AND EXISTING DRAWINGS. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.

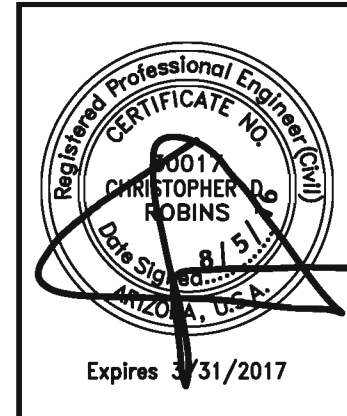


DRAWINGS ISSUE RECORD:
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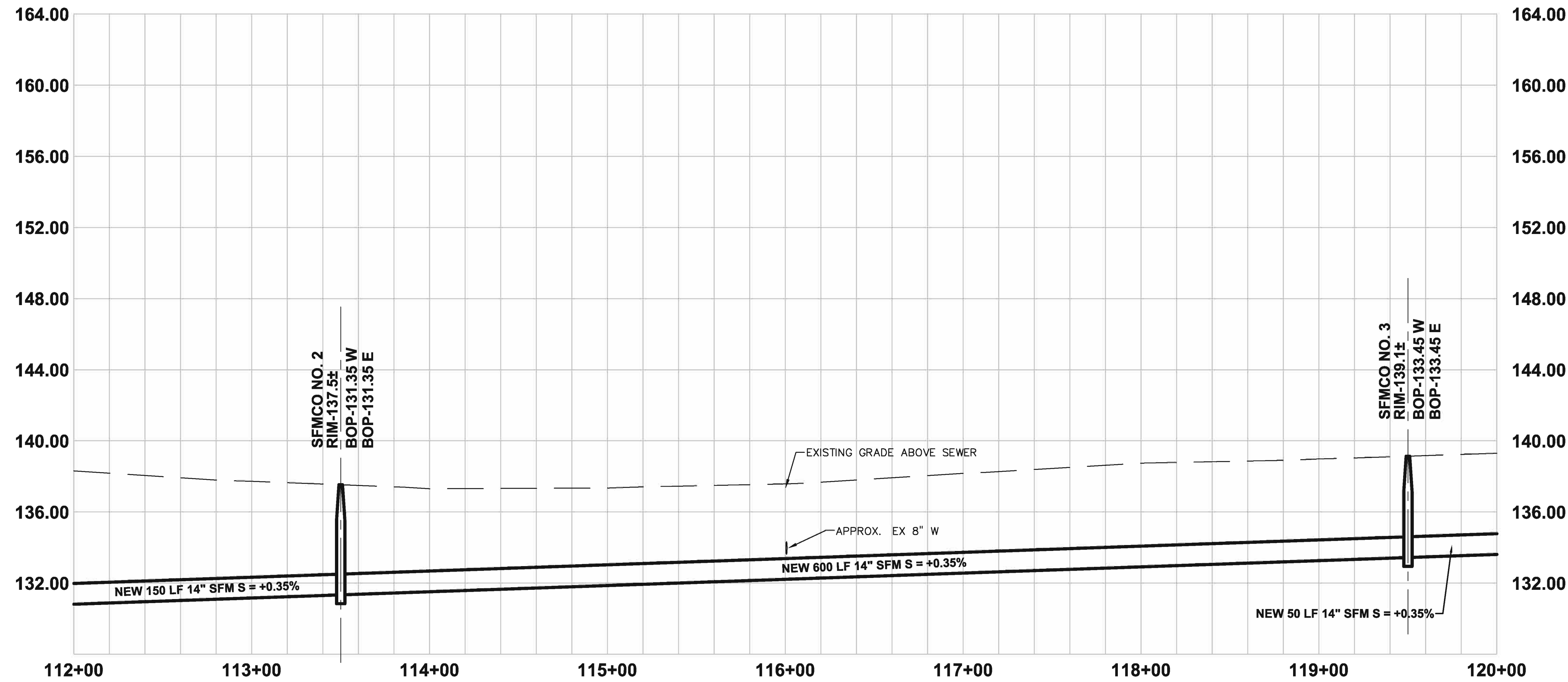
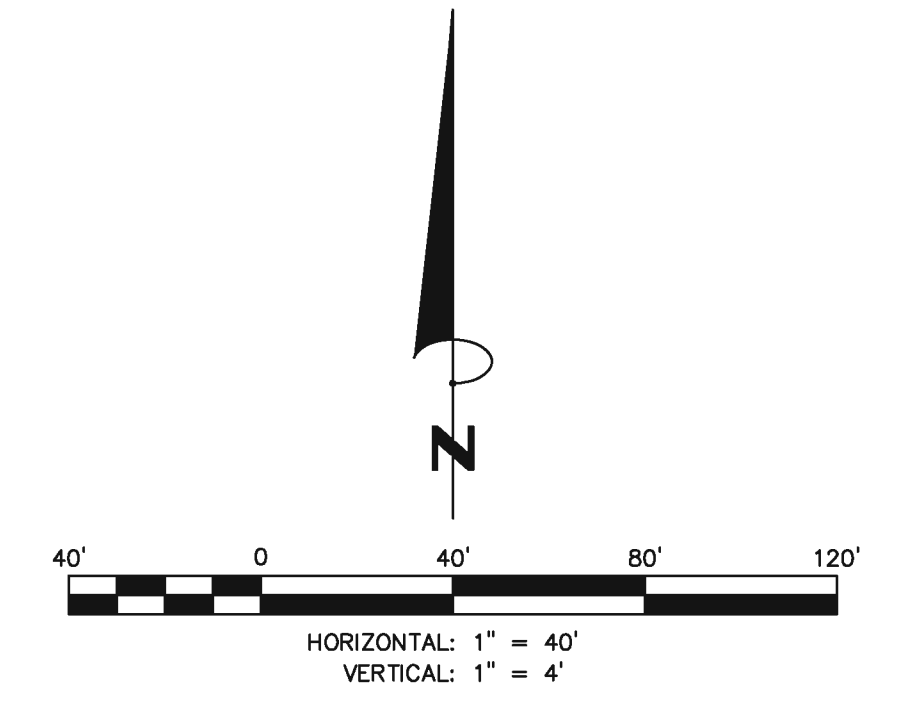
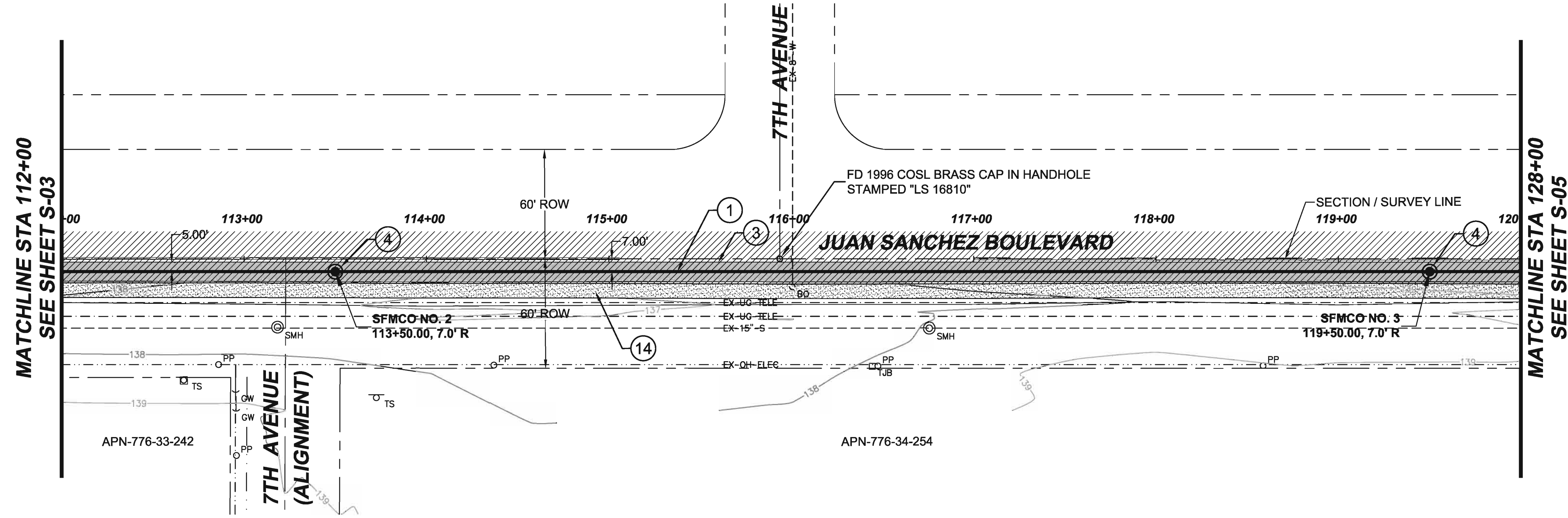
1500 S. 5th Avenue
Tulsa, AZ 85304
Phone: (918) 810-0825
Fax: (918) 810-0826
www.dahlrobins.com

DAHL, ROBINS & ASSOCIATES, INC.

CITY OF SAN LUIS
JUAN SANCHEZ BLVD LIFT STATION
SEWER PLAN AND PROFILE
JUAN SANCHEZ BOULEVARD - STA 105+00 TO STA 112+00



DATE:	AUG 2016
SURVEYED BY:	M.A.C.
DRAWN BY:	J.M.G.
DESIGNED BY:	C.D.R.
CHECKED BY:	K.A.D.
PROJECT NO.:	13033
SHEET	S-03

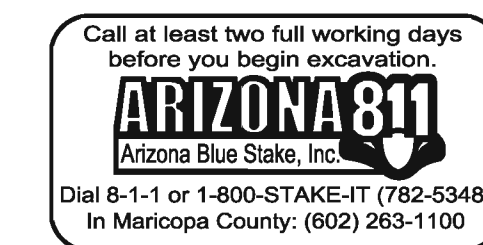


CONSTRUCTION NOTES			UNIT	QTY
1	14" CLASS 235 DR 18 PVC PIPE		LF	800
3	PAVEMENT REPLACEMENT - TYPE "B"		SY	1020
4	FORCE MAIN PRESSURE CLEANOUT		EA	2
14	8" WIDE 6" ABC SHOULDER		SY	711

NOTE: INSTALL NEW STRIPING AND PAVEMENT MARKINGS AS REQUIRED

UTILITY DISCLAIMER

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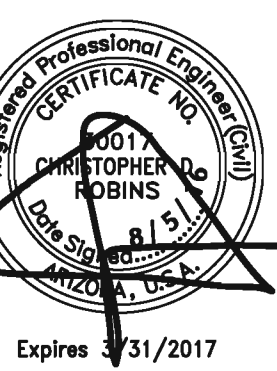
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Tulsa, AZ 85304
Phone: (918) 810-0825
Fax: (918) 810-0826
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DAHL, ROBINS & ASSOCIATES, INC.

CITY OF SAN LUIS
JUAN SANCHEZ BLVD LIFT STATION
SEWER PLAN AND PROFILE
JUAN SANCHEZ BOULEVARD - STA 112+00 TO 120+00



DATE: AUG 2016

SURVEYED BY: M.A.C.

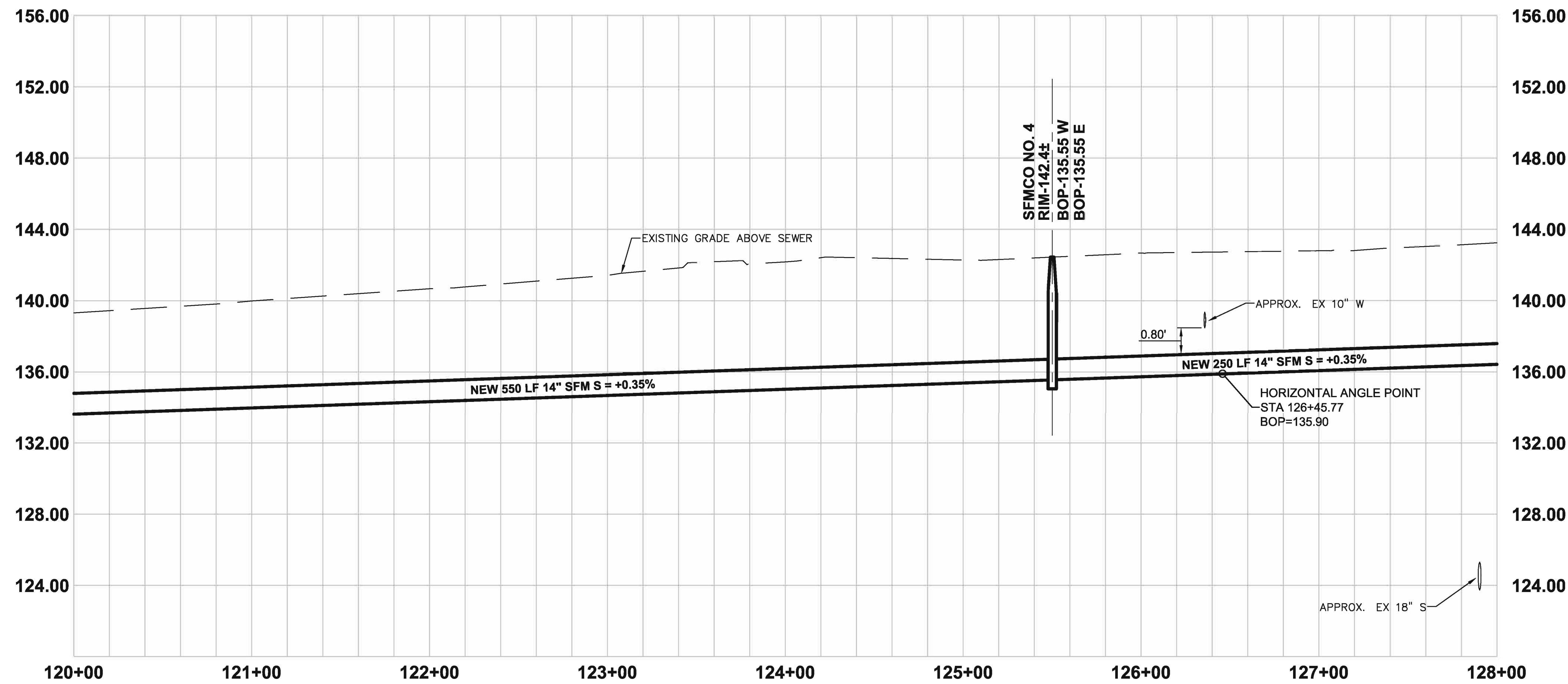
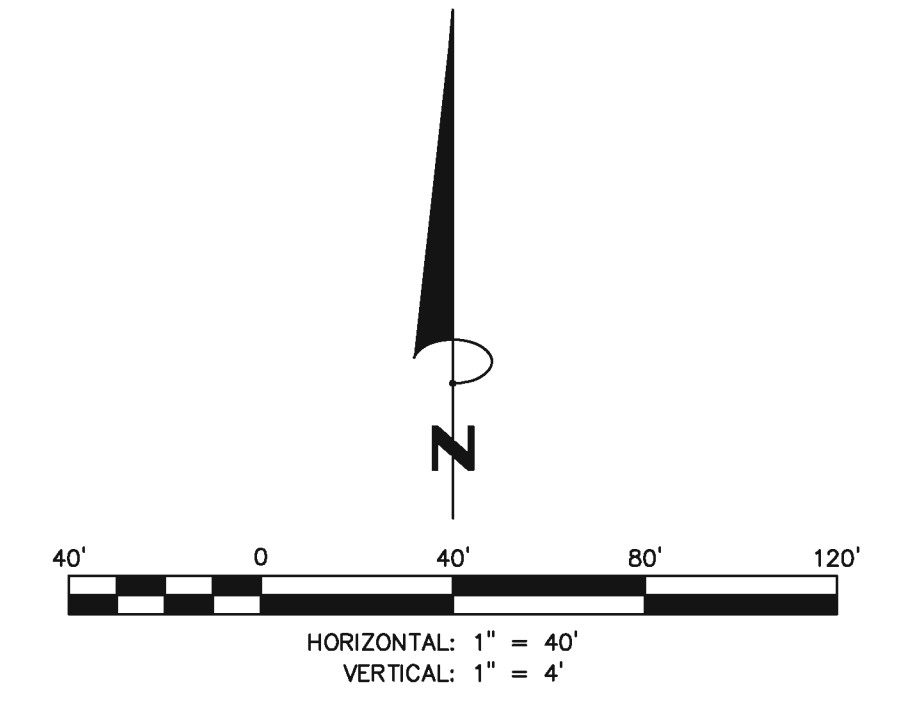
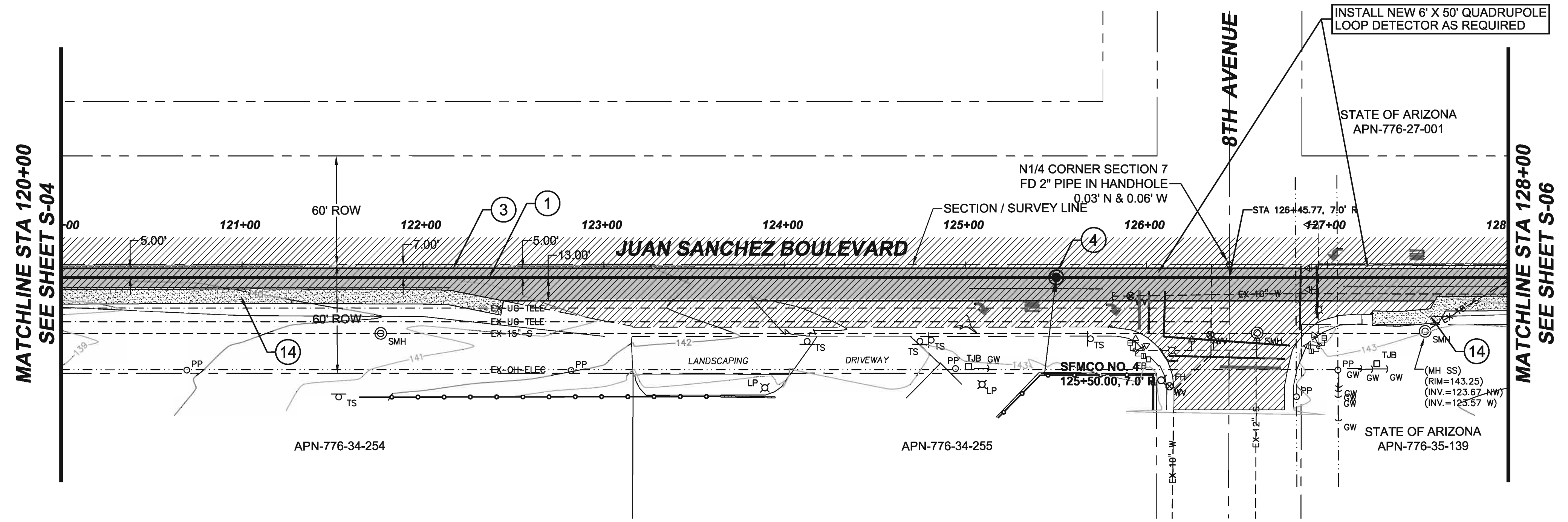
DRAWN BY: J.M.G.

DESIGNED BY: C.D.R.

CHECKED BY: K.A.D.

PROJECT NO.: 13033

SHEET



CONSTRUCTION NOTES			UNIT	QTY
1	14" CLASS 235 DR 18 PVC PIPE		LF	800
3	PAVEMENT REPLACEMENT - TYPE "B"		SY	1427
4	FORCE MAIN PRESSURE CLEANOUT		EA	1
14	8' WIDE 6" ABC SHOULDER		SY	288

NOTE: INSTALL NEW STRIPING AND PAVEMENT MARKINGS AS REQUIRED

UTILITY DISCLAIMER

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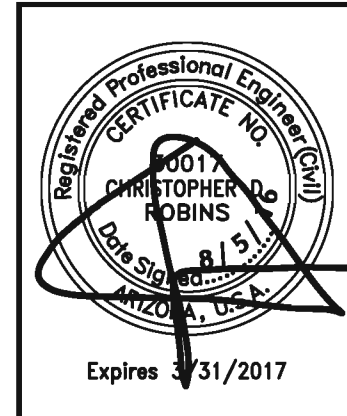


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DATE:

1500 S. 5th Avenue
Tulsa, AZ 85304
Phone: (918) 810-0826
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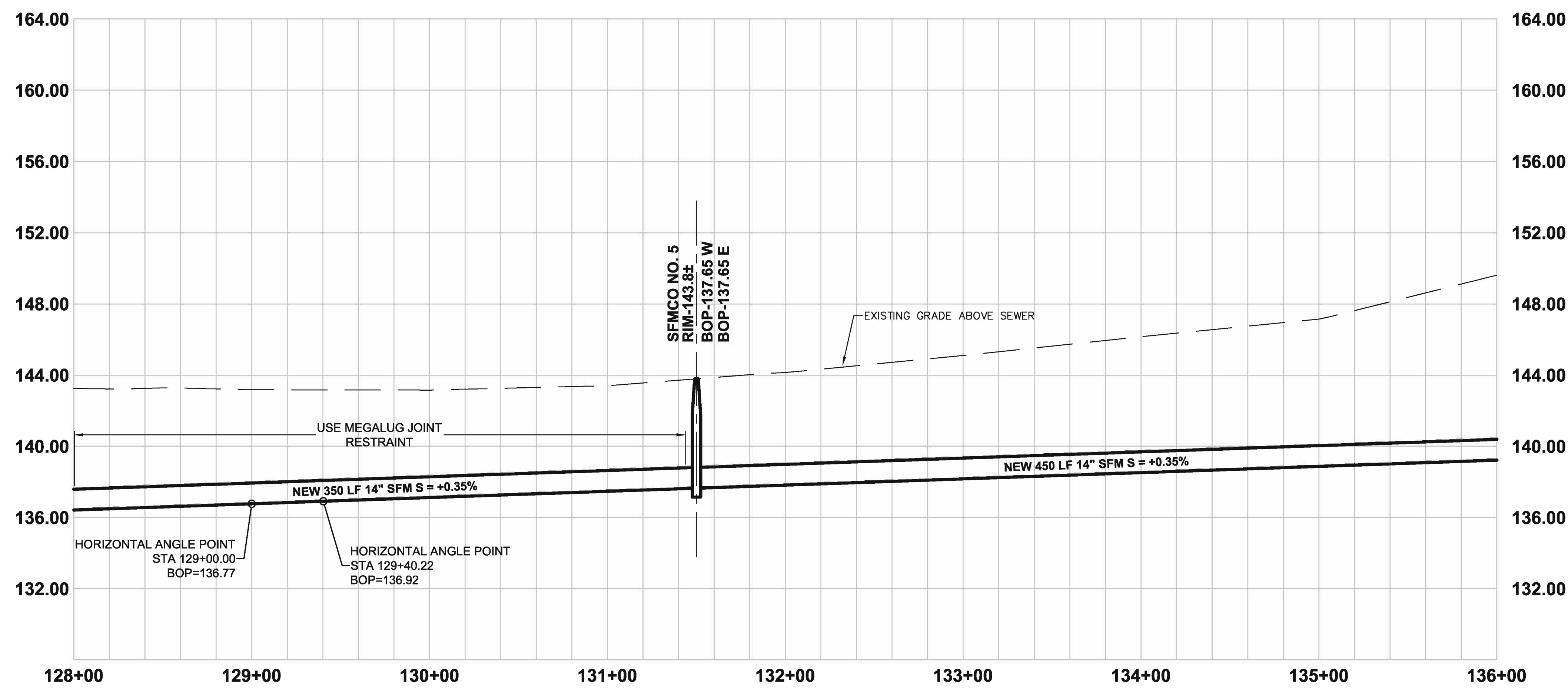
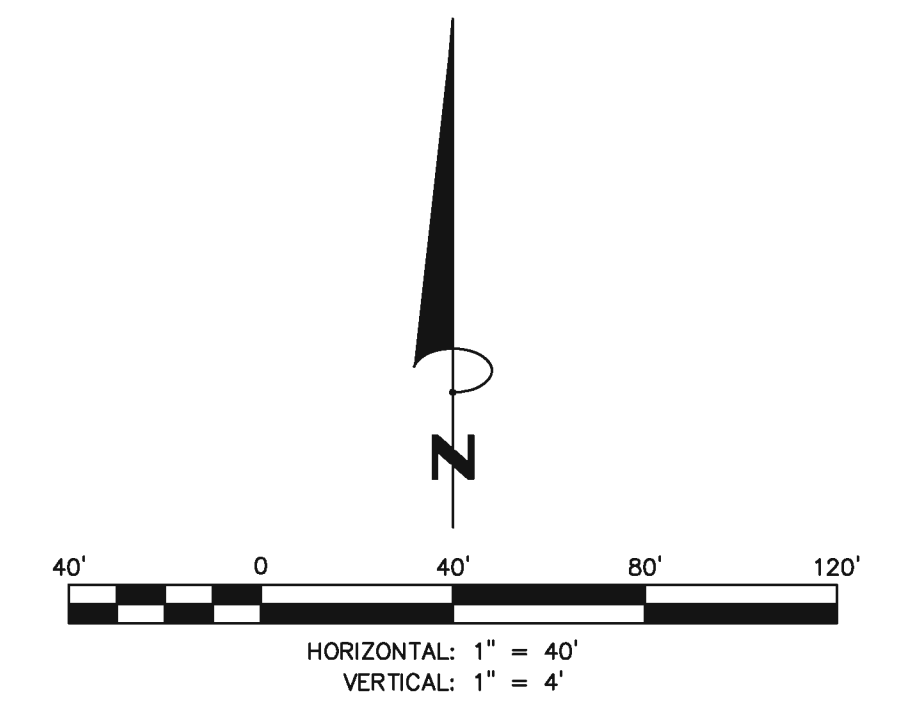
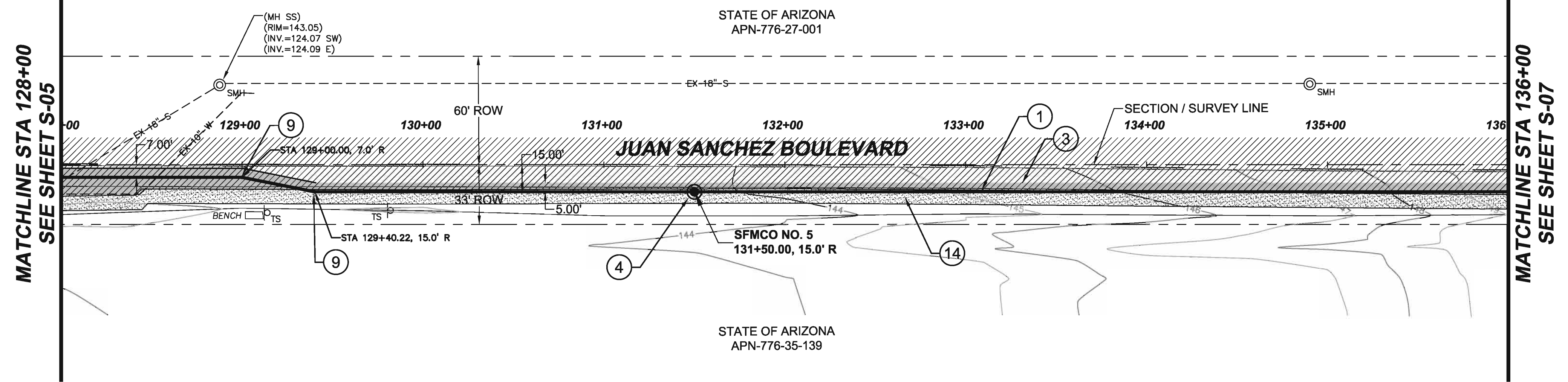
DAHL, ROBINS & ASSOCIATES, INC.

CITY OF SAN LUIS
JUAN SANCHEZ BLVD LIFT STATION
SEWER PLAN AND PROFILE
JUAN SANCHEZ BOULEVARD - 120+00 TO STA 128+00



DATE:	AUG 2016
SURVEYED BY:	M.A.C.
DRAWN BY:	J.M.G.
DESIGNED BY:	C.D.R.
CHECKED BY:	K.A.D.
PROJECT NO.:	13033
SHEET	S-05

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CONSTRUCTION NOTES			UNIT	QTY
1	14" CLASS 235 DR 18 PVC PIPE	LF	800	
3	PAVEMENT REPLACEMENT - TYPE "B"	SY	500	
4	FORCE MAIN PRESSURE CLEANOUT	EA	1	
9	14" 11 1/4" BEND - HORIZONTAL	EA	2	
14	8' WIDE 6" ABC SHOULDER	SY	713	

NOTE: INSTALL NEW STRIPING AND PAVEMENT MARKINGS AS REQUIRED

UTILITY DISCLAIMER

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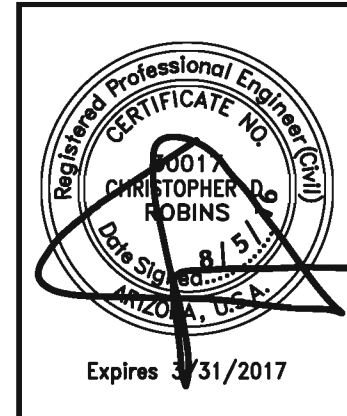


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Tulsa, AZ 85304
Phone: (918) 810-0826
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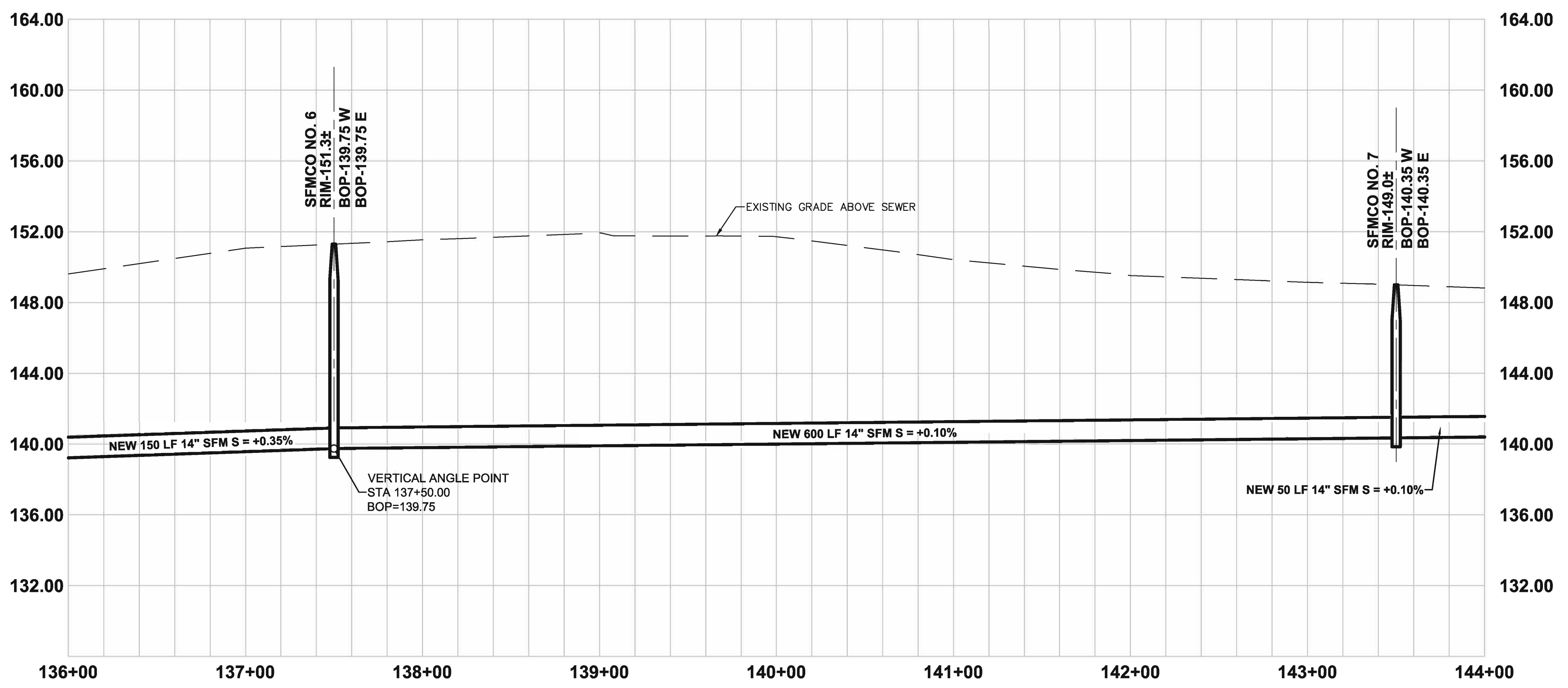
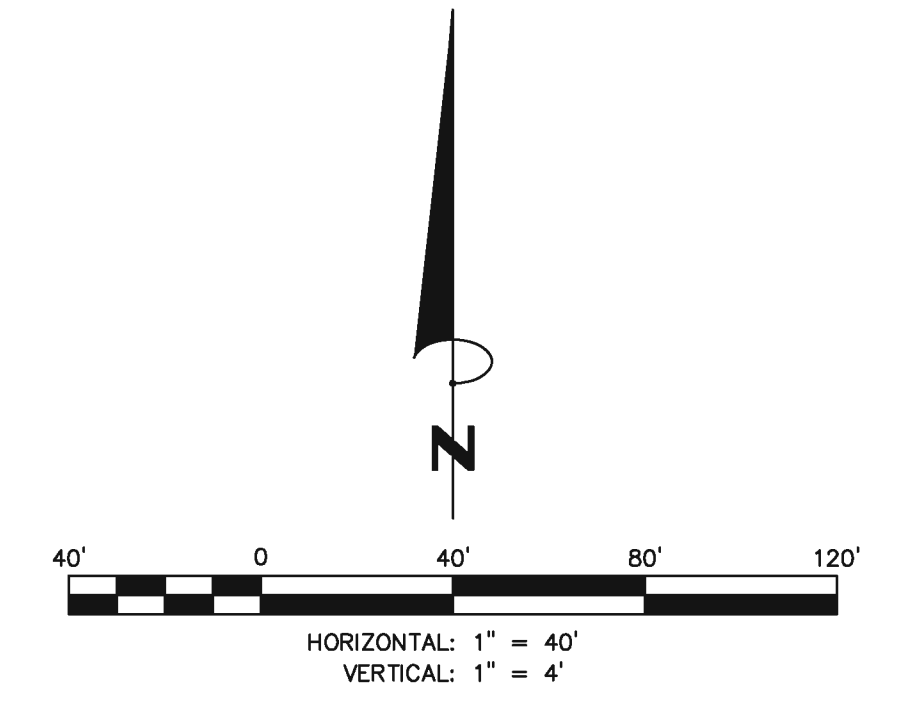
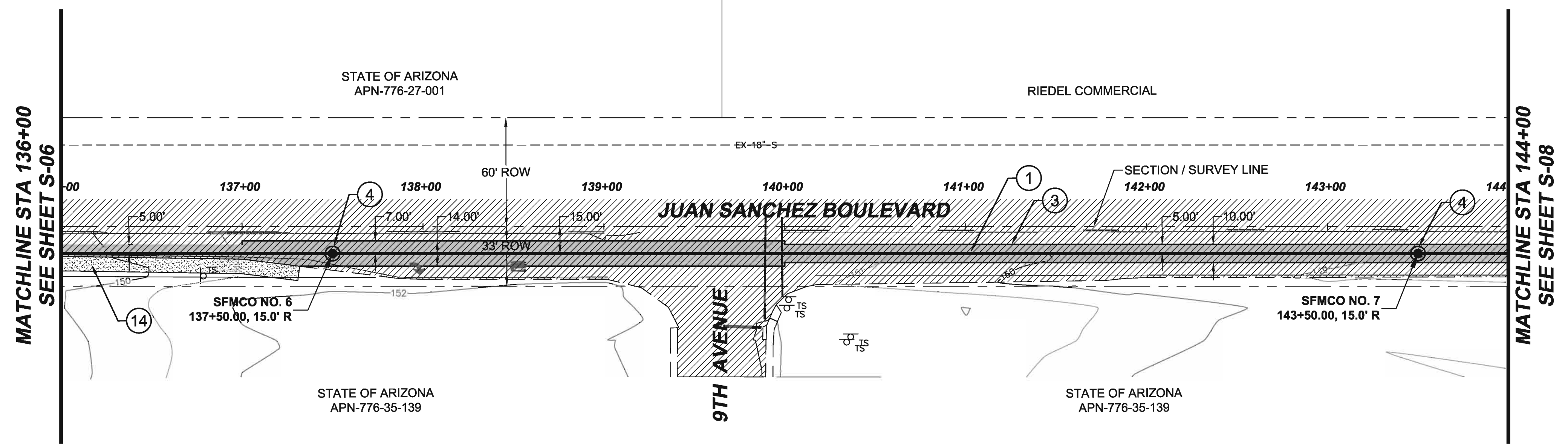
DAHL, ROBINS & ASSOCIATES, INC.

CITY OF SAN LUIS
JUAN SANCHEZ BLVD LIFT STATION
SEWER PLAN AND PROFILE
JUAN SANCHEZ BOULEVARD - STA 128+00 TO 136+00



DATE:	AUG 2016
SURVEYED BY:	M.A.C.
DRAWN BY:	J.M.G.
DESIGNED BY:	C.D.R.
CHECKED BY:	K.A.D.
PROJECT NO.:	13033

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CONSTRUCTION NOTES			UNIT	QTY
1	14" CLASS 235 DR 18 PVC PIPE		LF	800
3	PAVEMENT REPLACEMENT - TYPE "B"		SY	986
4	FORCE MAIN PRESSURE CLEANOUT		EA	2
14	8' WIDE 6" ABC SHOULDER		SY	117

NOTE: INSTALL NEW STRIPING AND PAVEMENT MARKINGS AS REQUIRED

UTILITY DISCLAIMER

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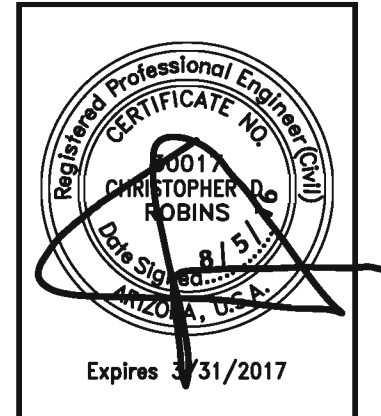
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Phone: (918) 810-0826
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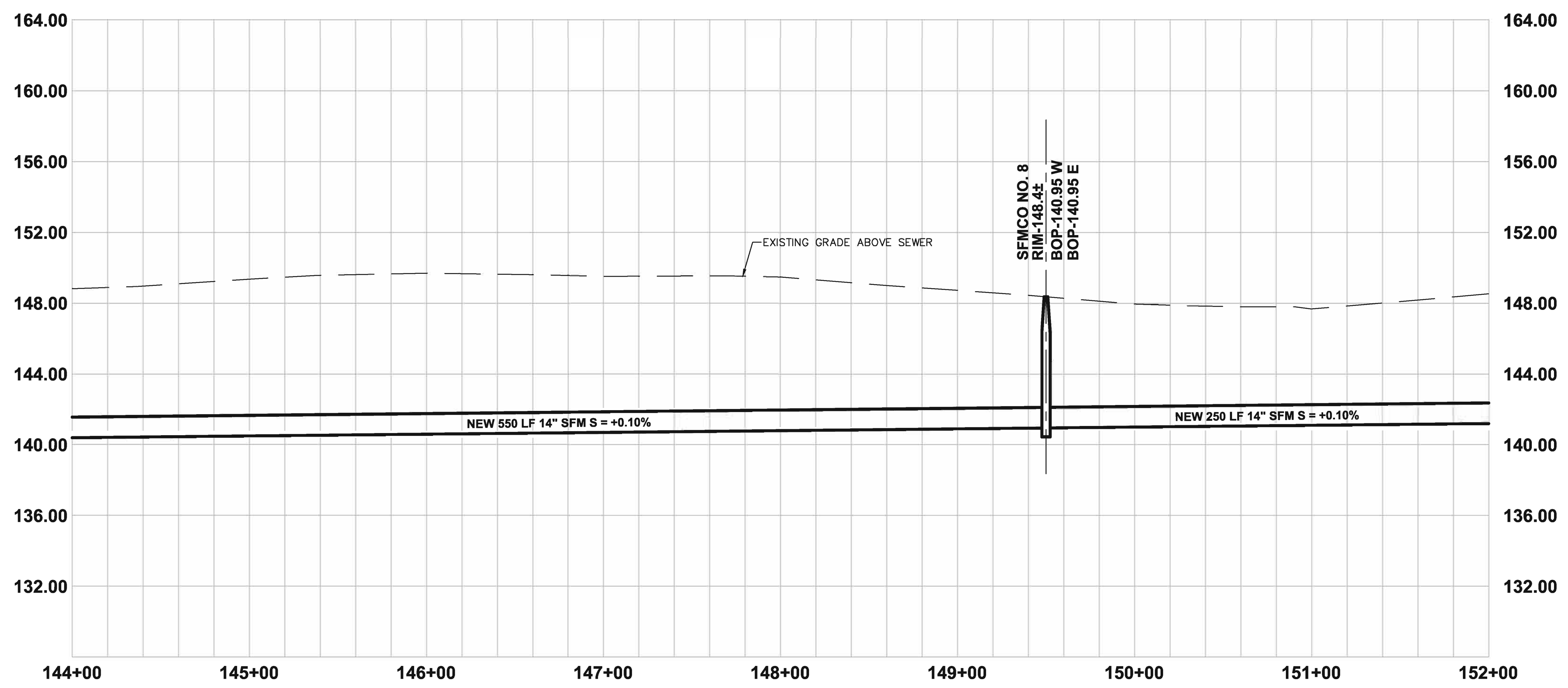
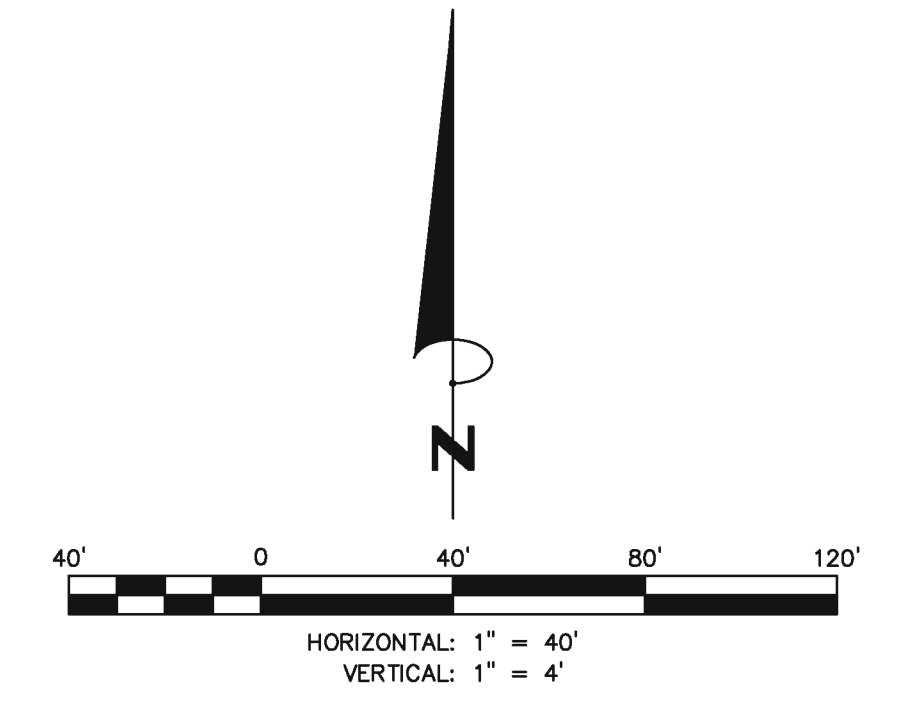
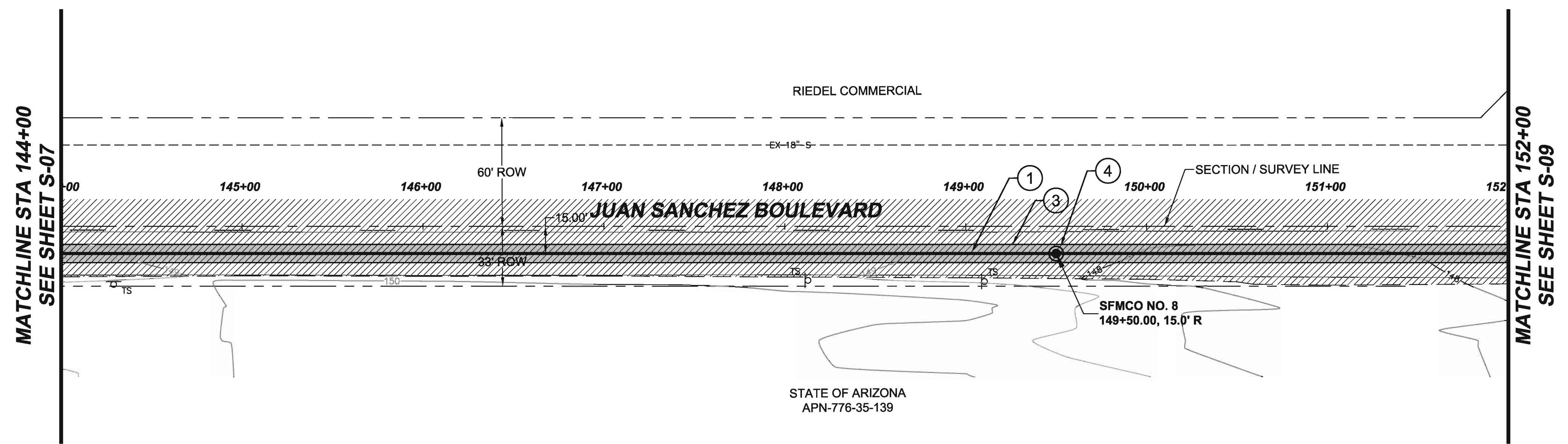
DAHL, ROBINS & ASSOCIATES, INC.

CITY OF SAN LUIS
JUAN SANCHEZ BLVD LIFT STATION
SEWER PLAN AND PROFILE
JUAN SANCHEZ BOULEVARD - STA 136+00 TO 144+00

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DATE:	AUG 2016
SURVEYED BY:	M.A.C.
DRAWN BY:	J.M.G.
DESIGNED BY:	C.D.R.
CHECKED BY:	K.A.D.
PROJECT NO.:	13033
SHEET	S-07



CONSTRUCTION NOTES			UNIT	QTY
1	14" CLASS 235 DR 18 PVC PIPE		LF	800
3	PAVEMENT REPLACEMENT - TYPE "B"		SY	889
4	FORCE MAIN PRESSURE CLEANOUT		EA	1

NOTE: INSTALL NEW STRIPING AND PAVEMENT MARKINGS AS REQUIRED

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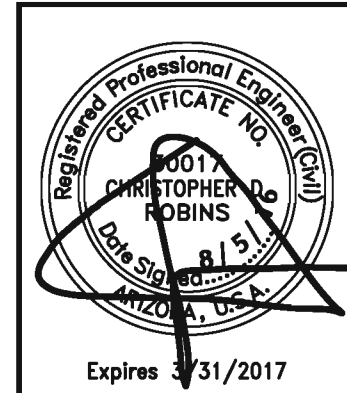


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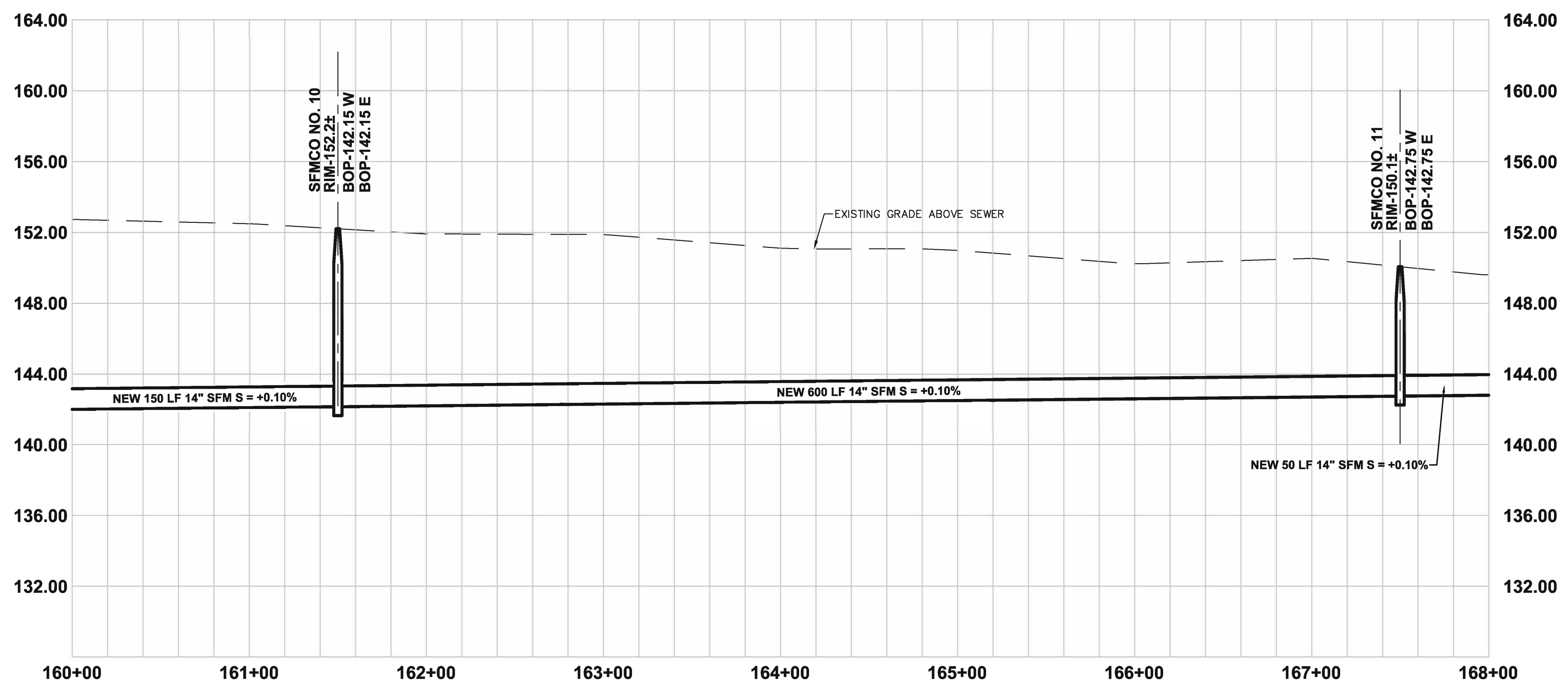
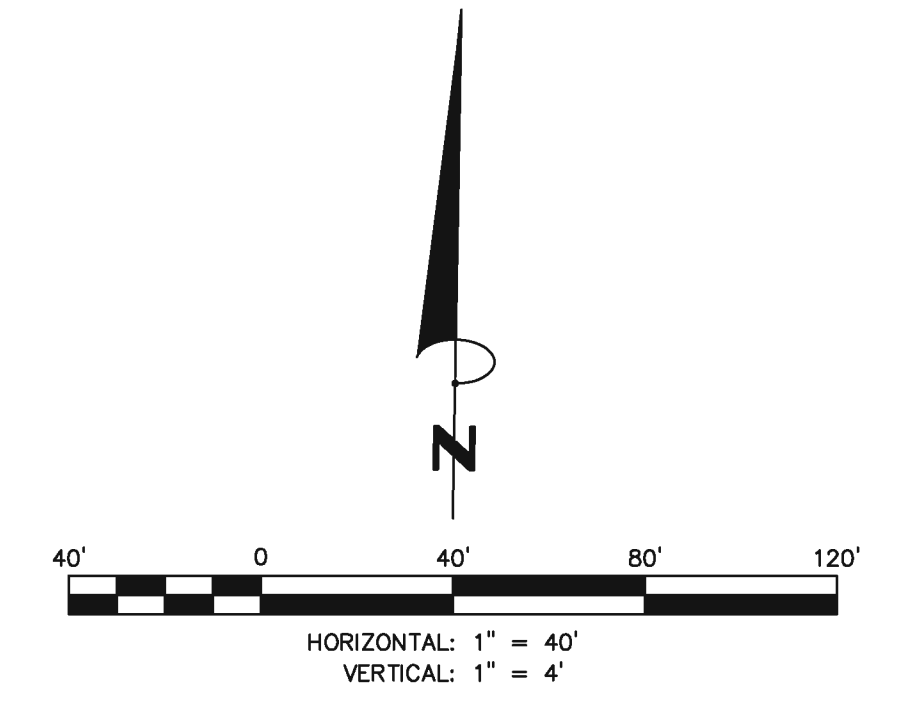
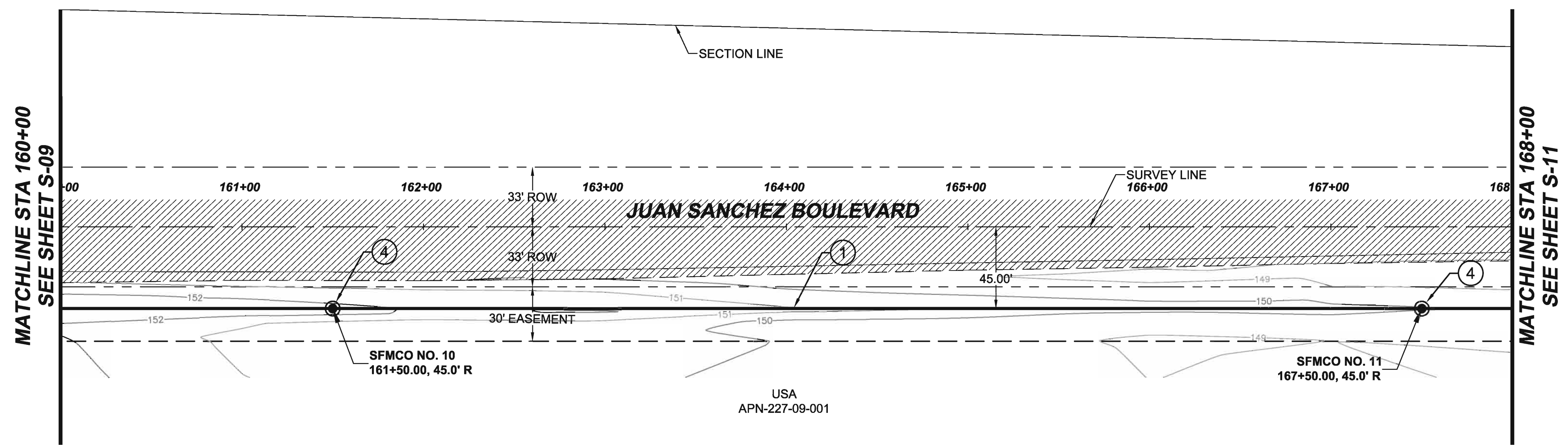
DATE:	
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DAHL, ROBINS & ASSOCIATES, INC.
 1500 S. 5th Avenue
 Tempe, AZ 85284
 Phone: (480) 812-0825
 Fax: (480) 812-0826
 www.dahlrobs.com

CITY OF SAN LUIS
JUAN SANCHEZ BLVD LIFT STATION
 SEWER PLAN AND PROFILE
 JUAN SANCHEZ BOULEVARD - STA 144+00 TO 152+00



DATE: AUG 2016
 SURVEYED BY: M.A.C.
 DRAWN BY: J.M.G.
 DESIGNED BY: C.D.R.
 CHECKED BY: K.A.D.
 PROJECT NO.: 13033
 SHEET



CONSTRUCTION NOTES			UNIT	QTY
1	14" CLASS 235 DR 18 PVC PIPE		LF	800
4	FORCE MAIN PRESSURE CLEANOUT		EA	2

NOTE: INSTALL NEW STRIPING AND PAVEMENT MARKINGS AS REQUIRED

UTILITY DISCLAIMER

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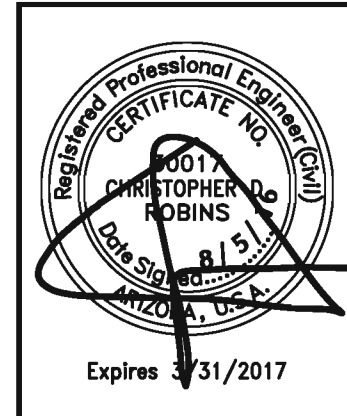


DRAWINGS ISSUE RECORD:

DATE:	
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DAHL, ROBINS & ASSOCIATES, INC.
 1560 S. 5th Avenue
 Tempe, AZ 85284
 Phone: (480) 818-0826
 Fax: (480) 818-0826
 www.dahlrobinson.com

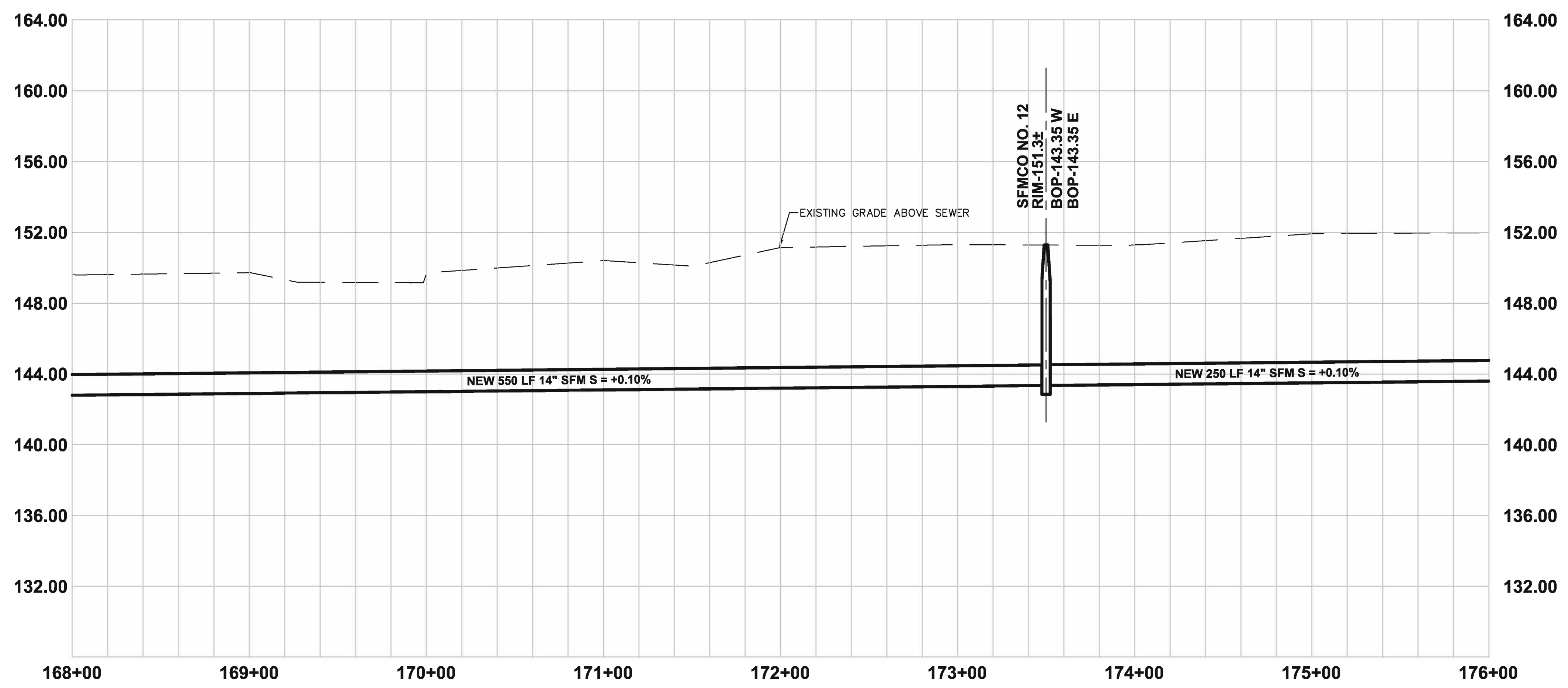
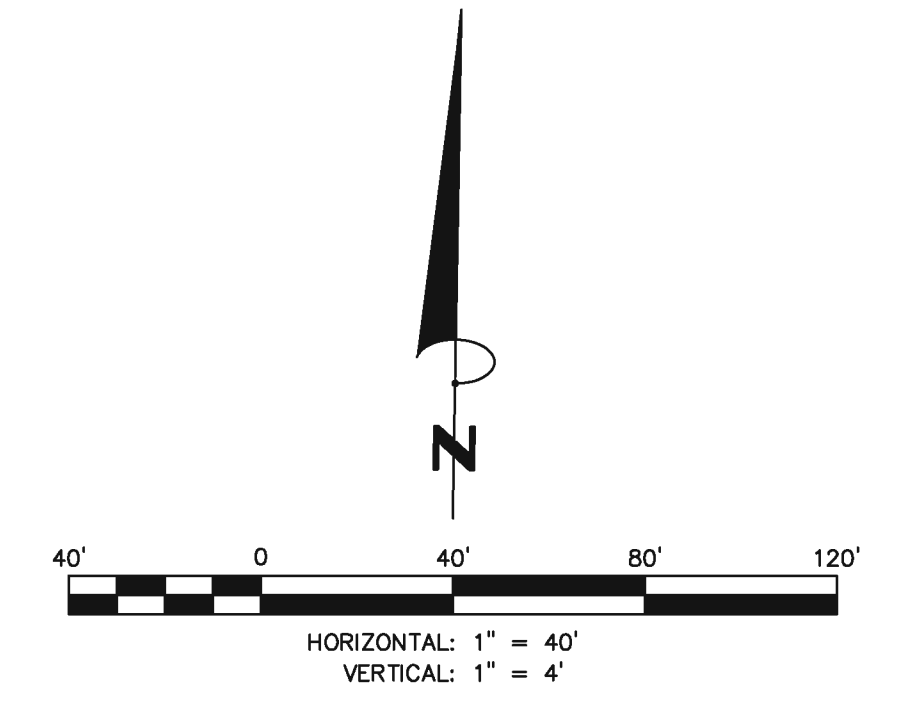
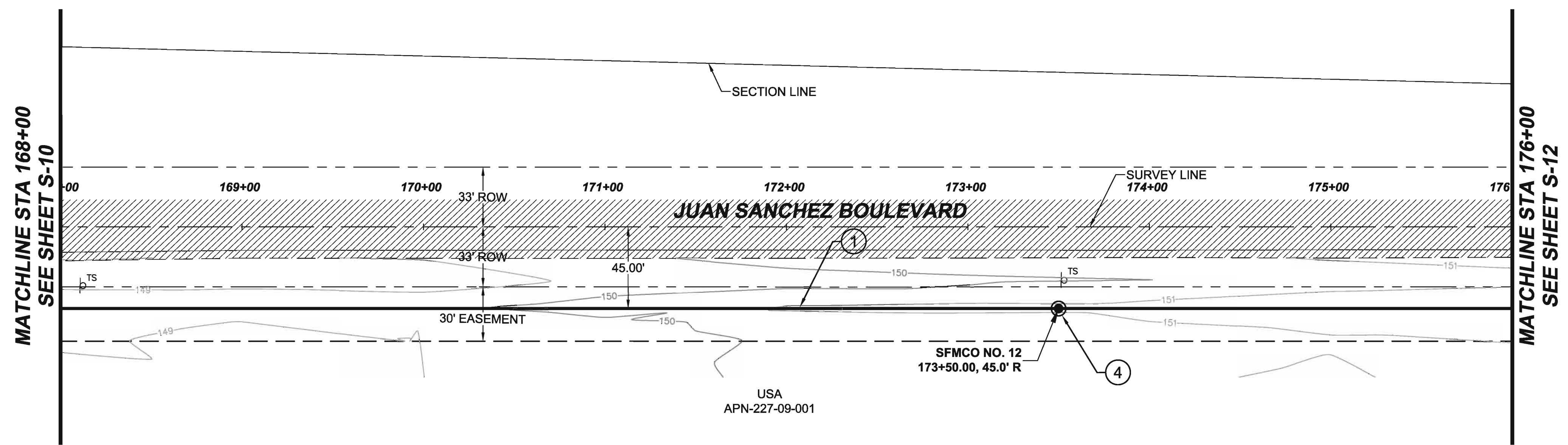
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JUAN SANCHEZ BLVD LIFT STATION
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 JUAN SANCHEZ BOULEVARD - STA 160+00 TO 168+00



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DATE:	AUG 2016
SURVEYED BY:	M.A.C.
DRAWN BY:	J.M.G.
DESIGNED BY:	C.D.R.
CHECKED BY:	K.A.D.
PROJECT NO.:	13033

SHEET **S-10**



CONSTRUCTION NOTES			UNIT	QTY
1	14" CLASS 235 DR 18 PVC PIPE	LF	800	
4	FORCE MAIN PRESSURE CLEANOUT	EA	1	

NOTE: INSTALL NEW STRIPING AND PAVEMENT MARKINGS AS REQUIRED

UTILITY DISCLAIMER

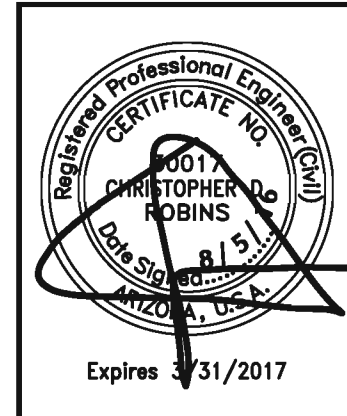
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DATE:	
DRAWINGS ISSUE RECORD:	

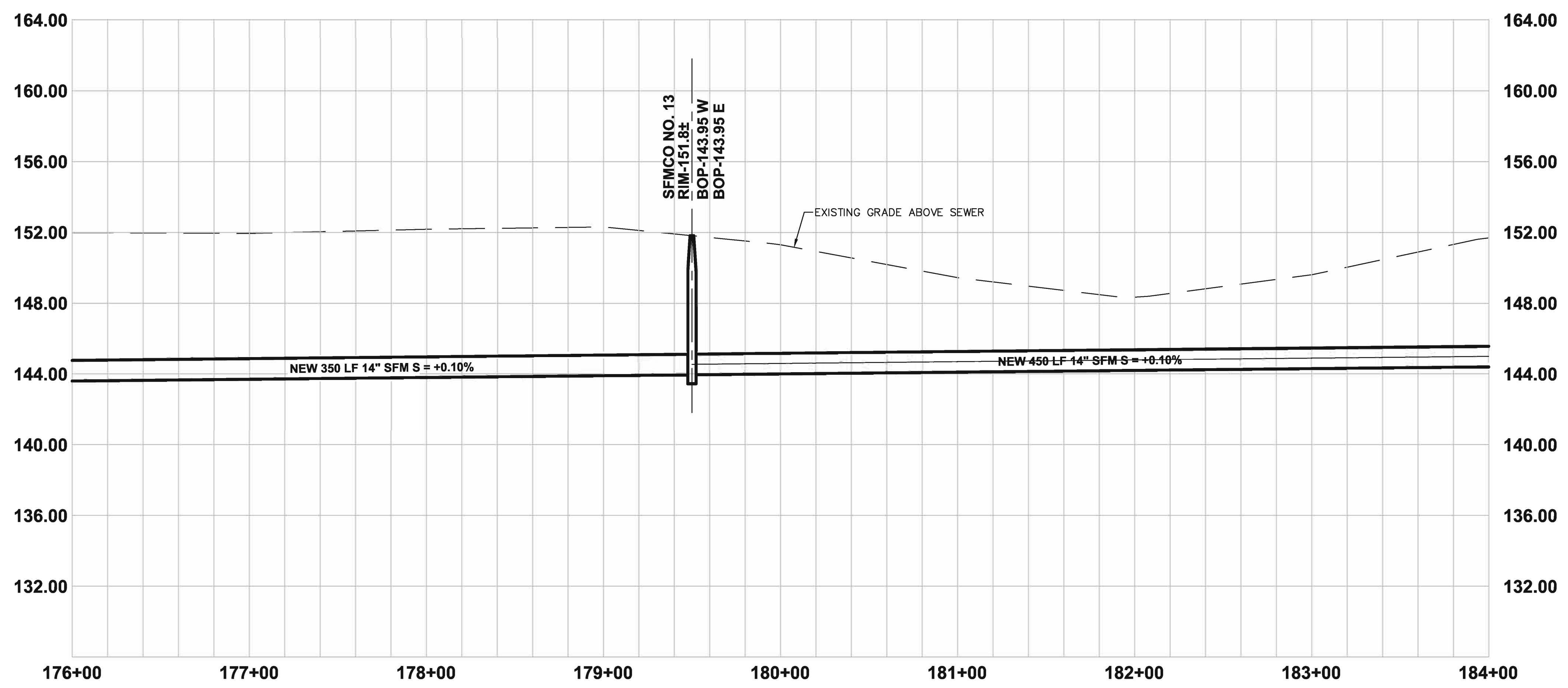
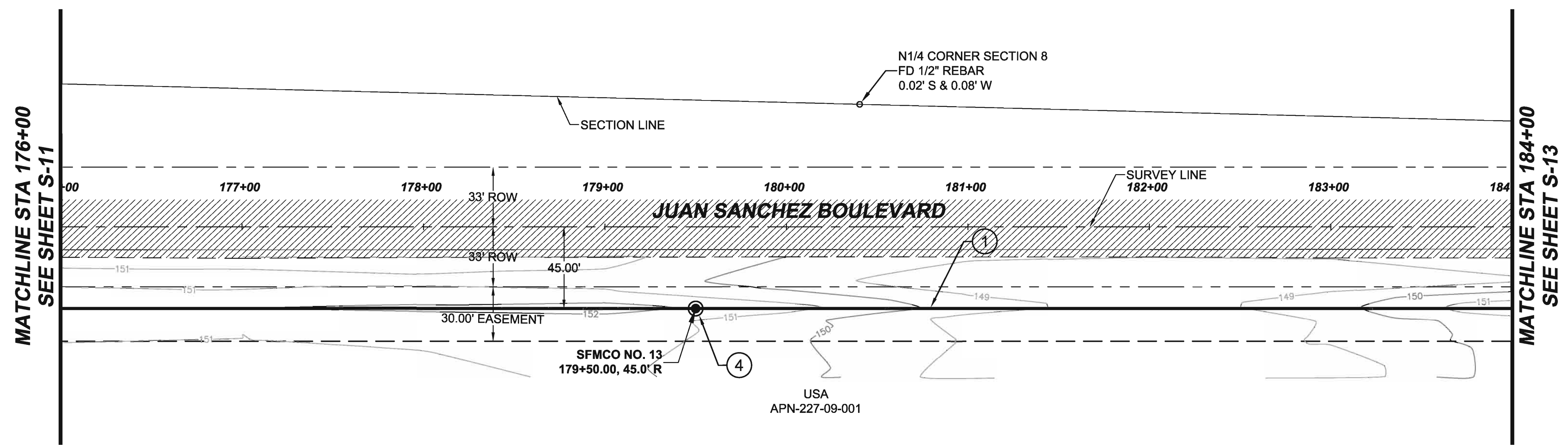
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CITY OF SAN LUIS
JUAN SANCHEZ BLVD LIFT STATION
 SEWER PLAN AND PROFILE
 JUAN SANCHEZ BOULEVARD - STA 168+00 TO 176+00



DATE:	AUG 2016
SURVEYED BY:	M.A.C.
DRAWN BY:	J.M.G.
DESIGNED BY:	C.D.R.
CHECKED BY:	K.A.D.
PROJECT NO.:	13033
SHEET	S-11

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CONSTRUCTION NOTES			UNIT	QTY
1	14" CLASS 235 DR 18 PVC PIPE		LF	800
4	FORCE MAIN PRESSURE CLEANOUT		EA	1

NOTE: INSTALL NEW STRIPING AND PAVEMENT MARKINGS AS REQUIRED

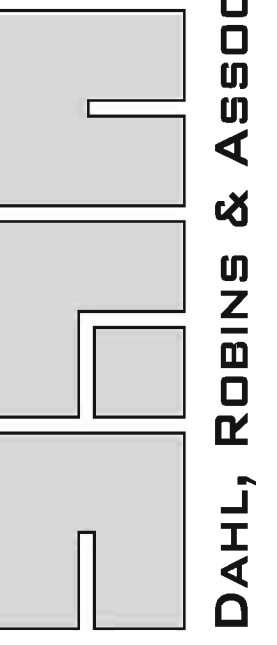
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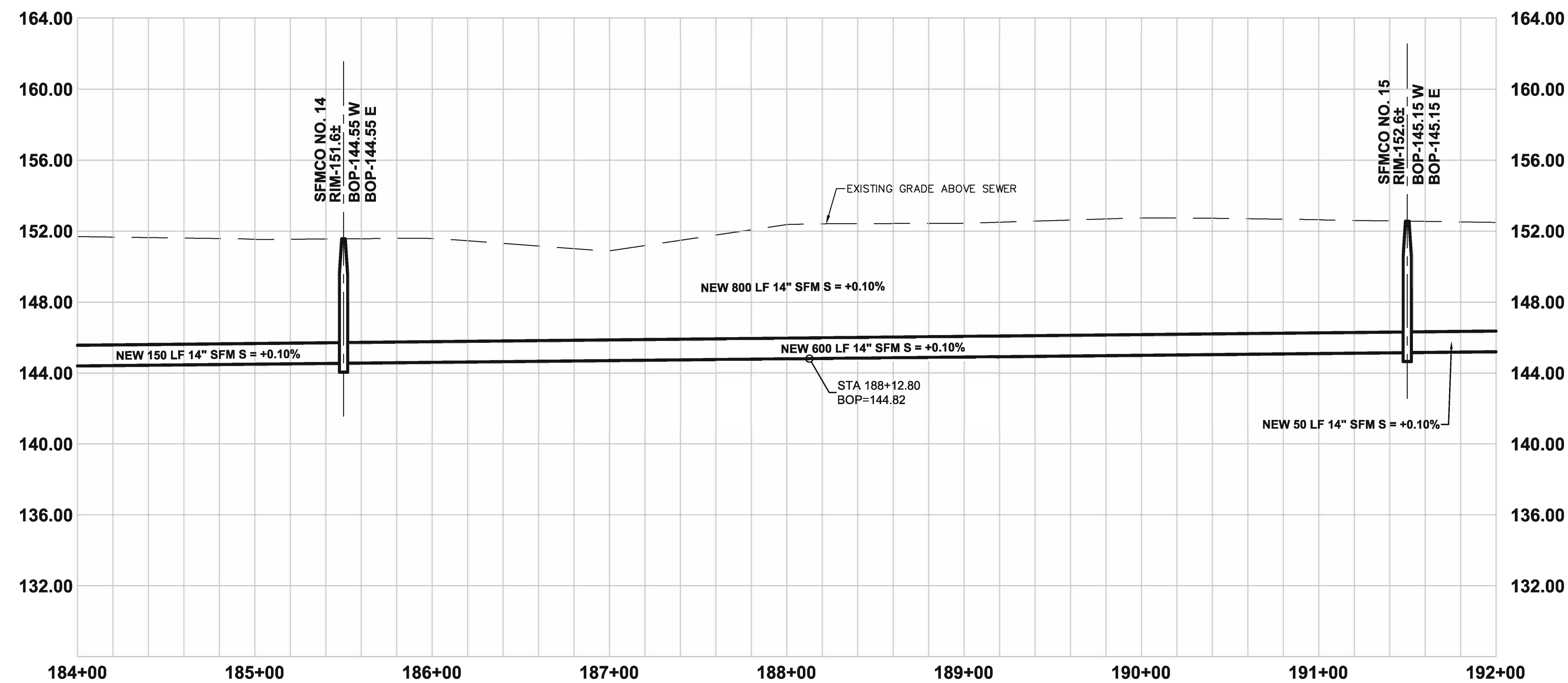
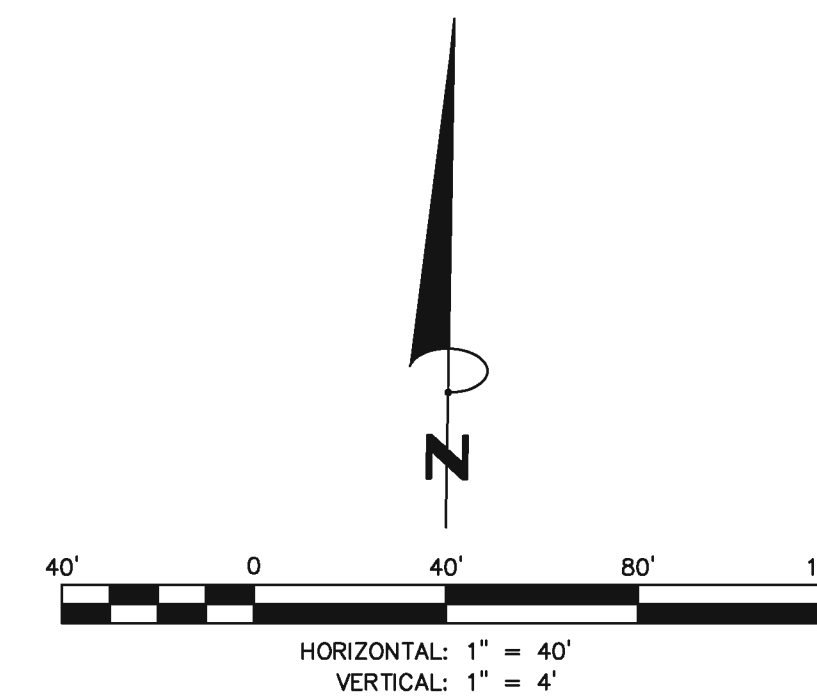
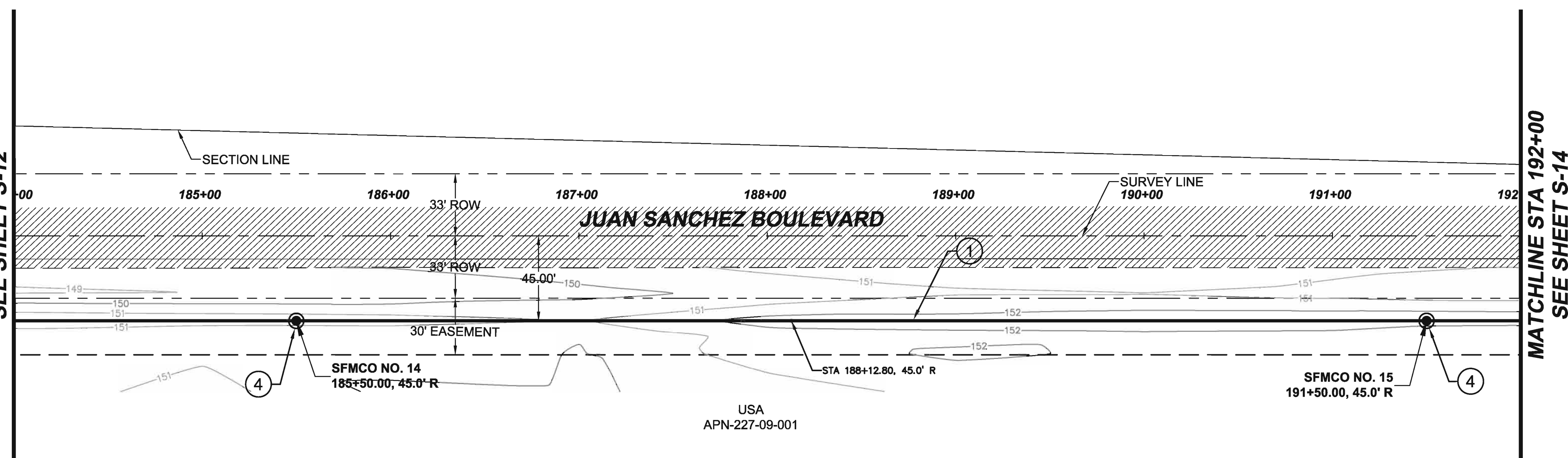
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SEWER PLAN AND PROFILE
JUAN SANCHEZ BOULEVARD - STA 176+00 TO 184+00



DATE:	AUG 2016
SURVEYED BY:	M.A.C.
DRAWN BY:	J.M.G.
DESIGNED BY:	C.D.R.
CHECKED BY:	K.A.D.
PROJECT NO.:	13033
SHEET	S-12

MATCHLINE STA 184+00
SEE SHEET S-12



CONSTRUCTION NOTES			UNIT	QTY
1	14" CLASS 235 DR 18 PVC PIPE		LF	800
4	FORCE MAIN PRESSURE CLEANOUT		EA	2

NOTE: INSTALL NEW STRIPING AND PAVEMENT MARKINGS AS REQUIRED

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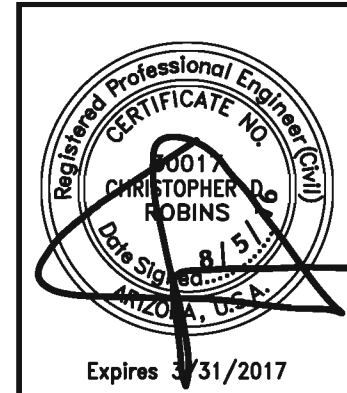


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Tulsa, AZ 85304
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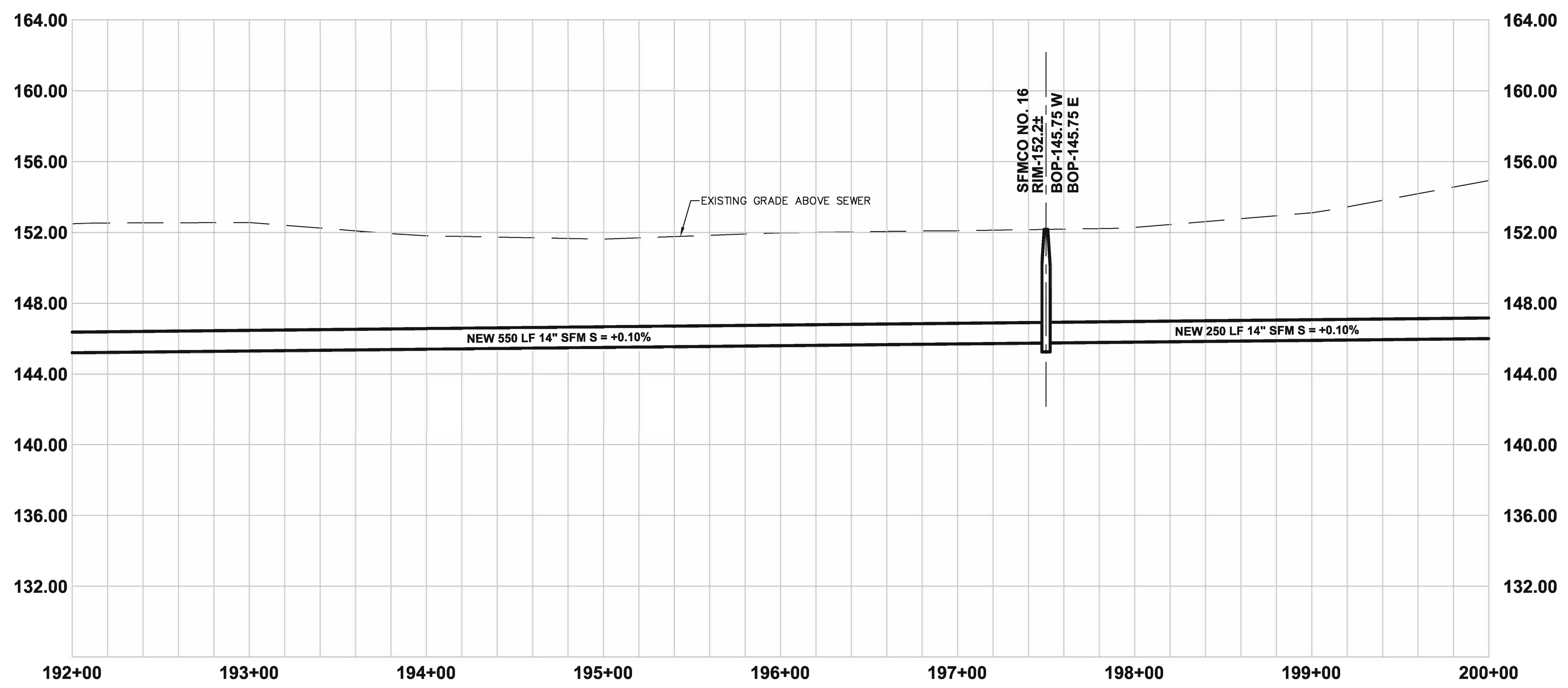
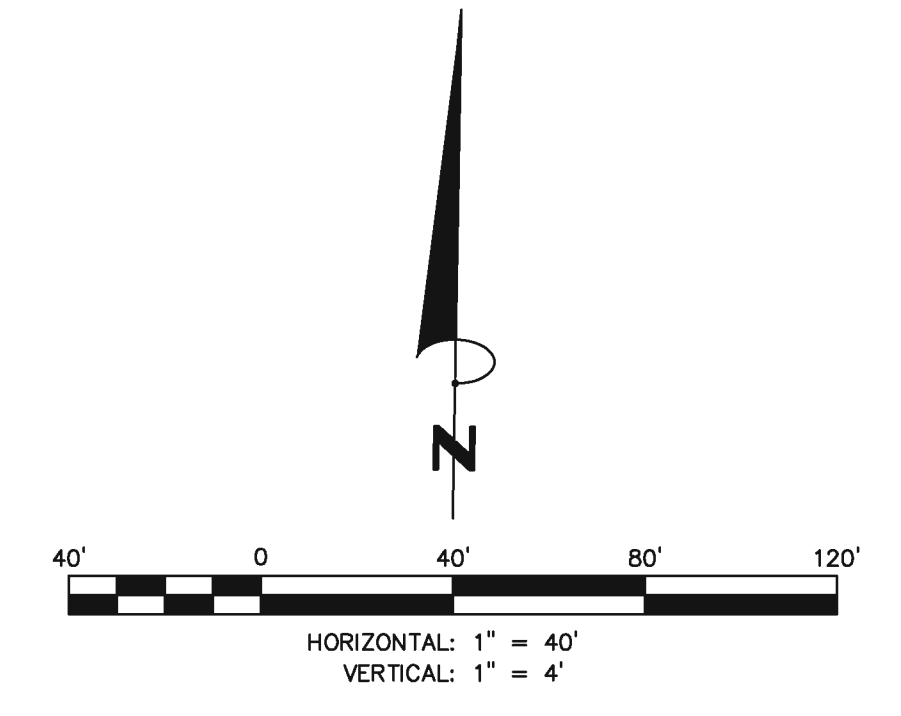
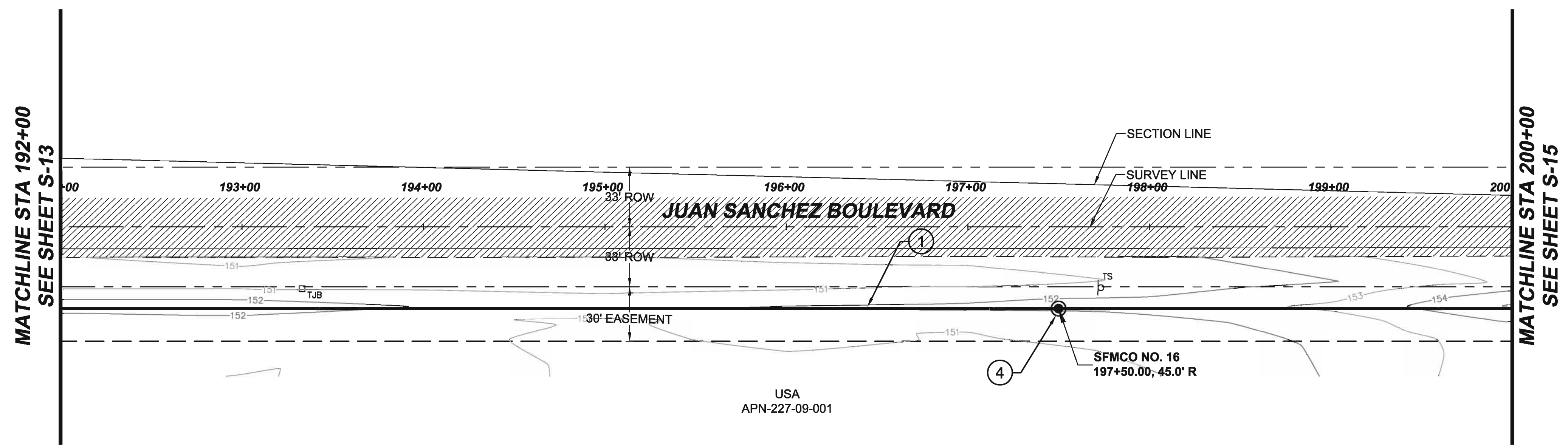
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CITY OF SAN LUIS
JUAN SANCHEZ BLVD LIFT STATION
SEWER PLAN AND PROFILE
JUAN SANCHEZ BOULEVARD - STA 184+00 TO 192+00



DATE:	AUG 2016
SURVEYED BY:	M.A.C.
DRAWN BY:	J.M.G.
DESIGNED BY:	C.D.R.
CHECKED BY:	K.A.D.
PROJECT NO.:	13033
SHEET	S-13

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CONSTRUCTION NOTES			UNIT	QTY
1	14" CLASS 235 DR 18 PVC PIPE	LF	800	
4	FORCE MAIN PRESSURE CLEANOUT	EA	1	

NOTE: INSTALL NEW STRIPING AND PAVEMENT MARKINGS AS REQUIRED

UTILITY DISCLAIMER

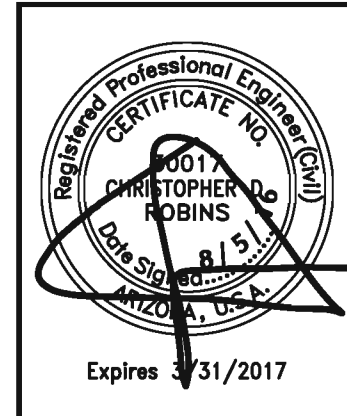
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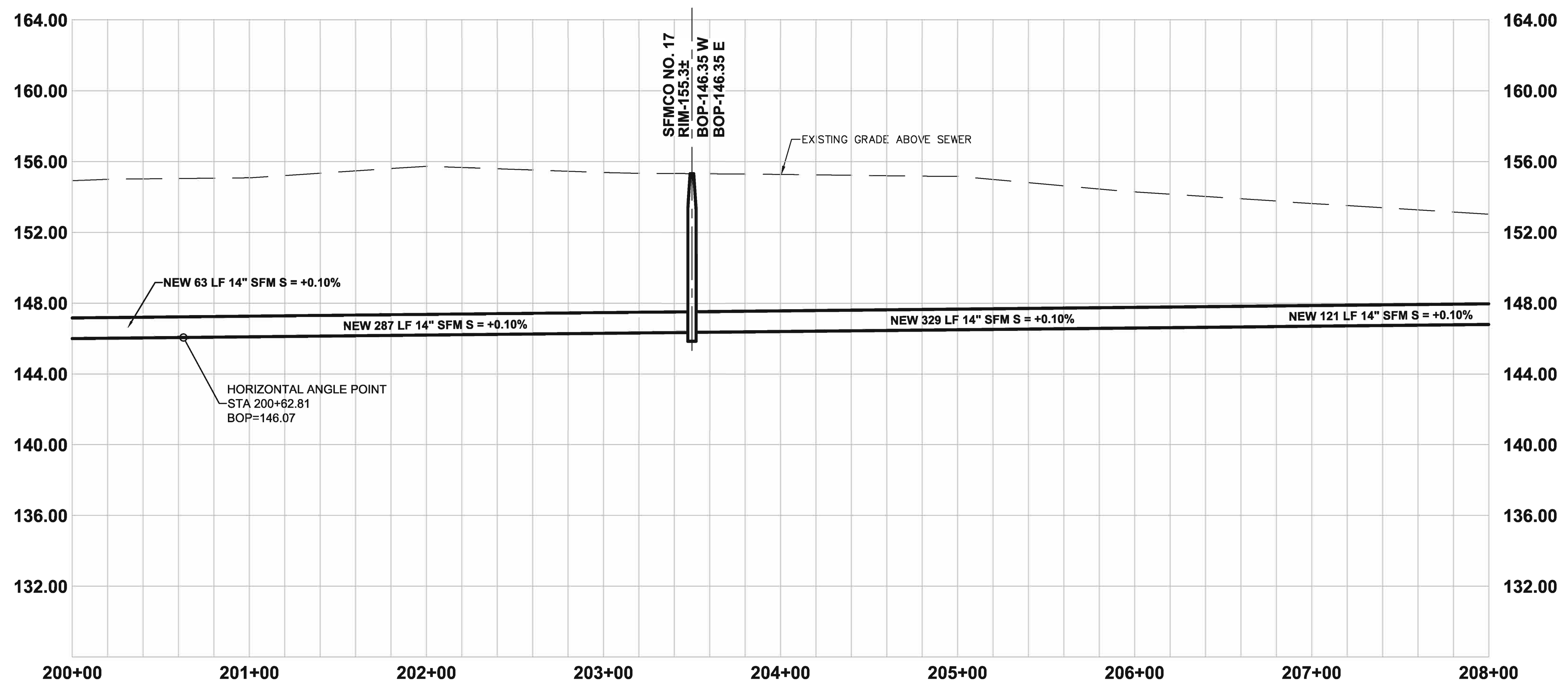
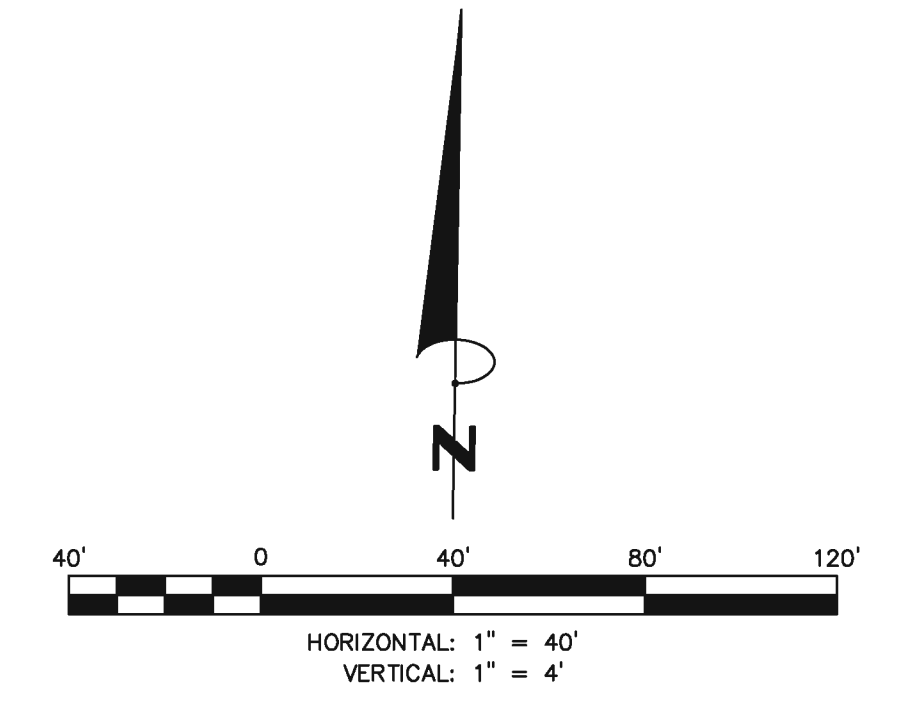
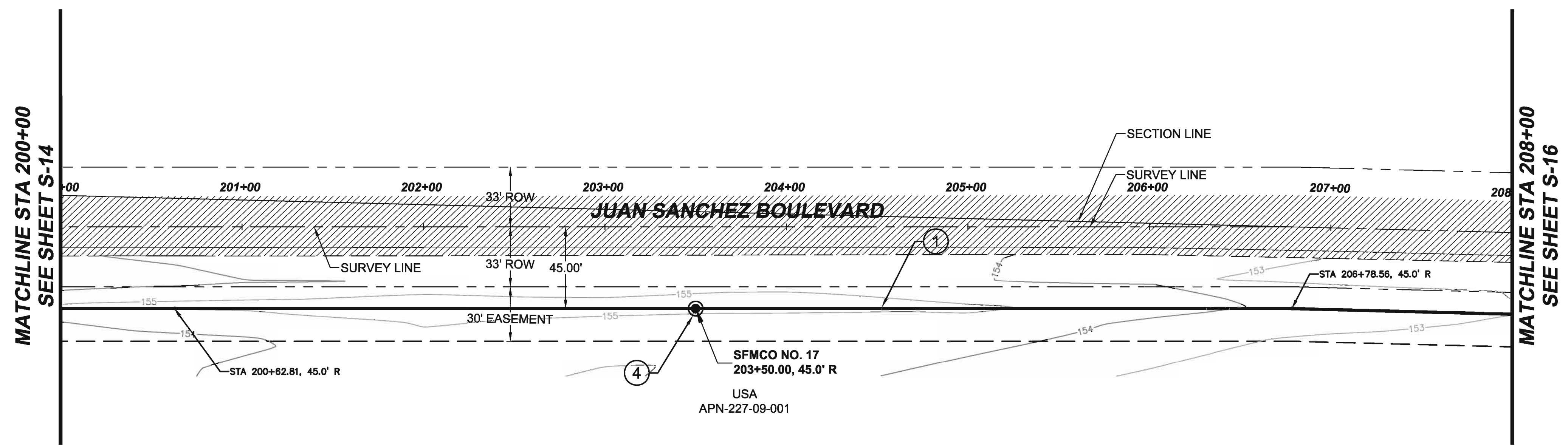
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JUAN SANCHEZ BLVD LIFT STATION
 SEWER PLAN AND PROFILE
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DATE:	AUG 2016
SURVEYED BY:	M.A.C.
DRAWN BY:	J.M.G.
DESIGNED BY:	C.D.R.
CHECKED BY:	K.A.D.
PROJECT NO.:	13033
SHEET	S-14

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CONSTRUCTION NOTES			UNIT	QTY
1	14" CLASS 235 DR 18 PVC PIPE		LF	800
4	FORCE MAIN PRESSURE CLEANOUT		EA	1

NOTE: INSTALL NEW STRIPING AND PAVEMENT MARKINGS AS REQUIRED

UTILITY DISCLAIMER

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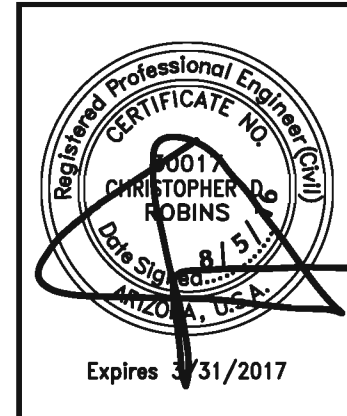


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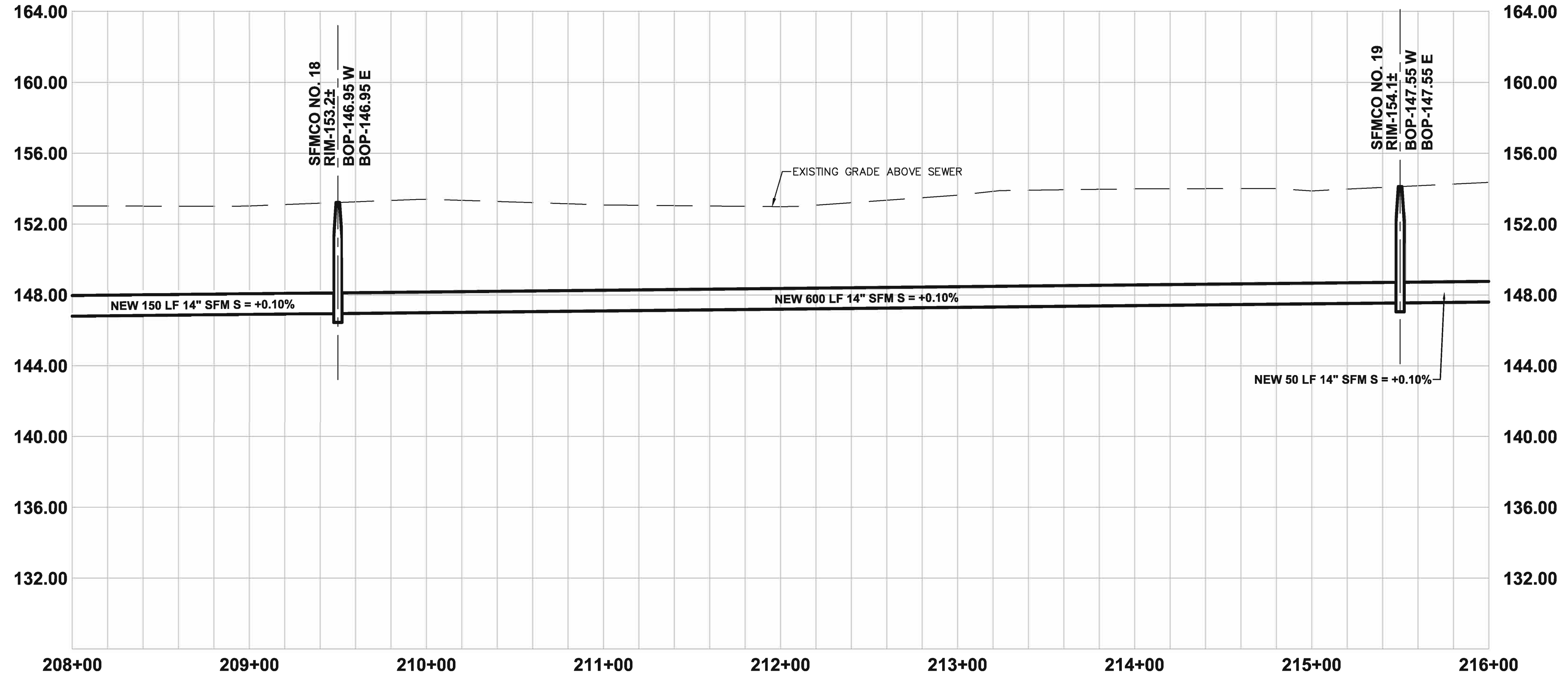
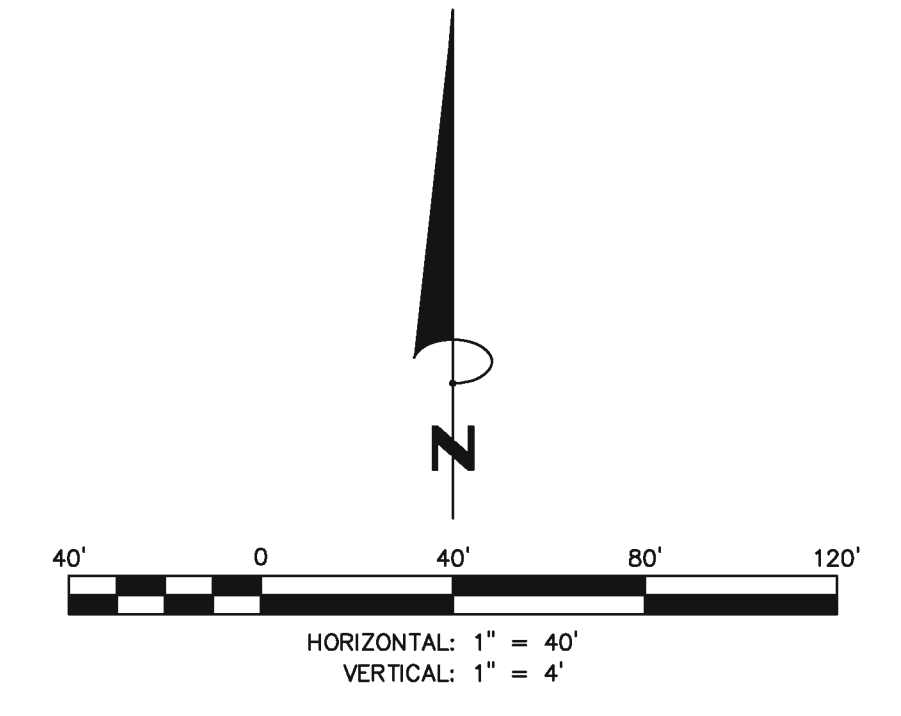
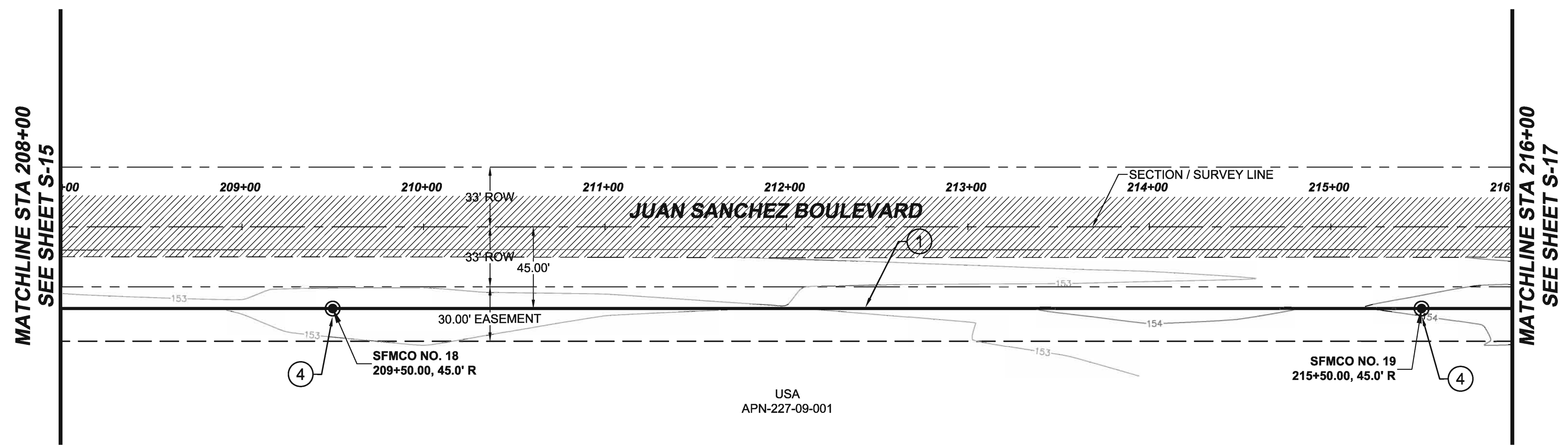
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DATE:	AUG 2016
SURVEYED BY:	M.A.C.
DRAWN BY:	J.M.G.
DESIGNED BY:	C.D.R.
CHECKED BY:	K.A.D.
PROJECT NO.:	13033
SHEET	S-15

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CONSTRUCTION NOTES			UNIT	QTY
1	14" CLASS 235 DR 18 PVC PIPE		LF	800
4	FORCE MAIN PRESSURE CLEANOUT		EA	2

NOTE: INSTALL NEW STRIPING AND PAVEMENT MARKINGS AS REQUIRED

UTILITY DISCLAIMER

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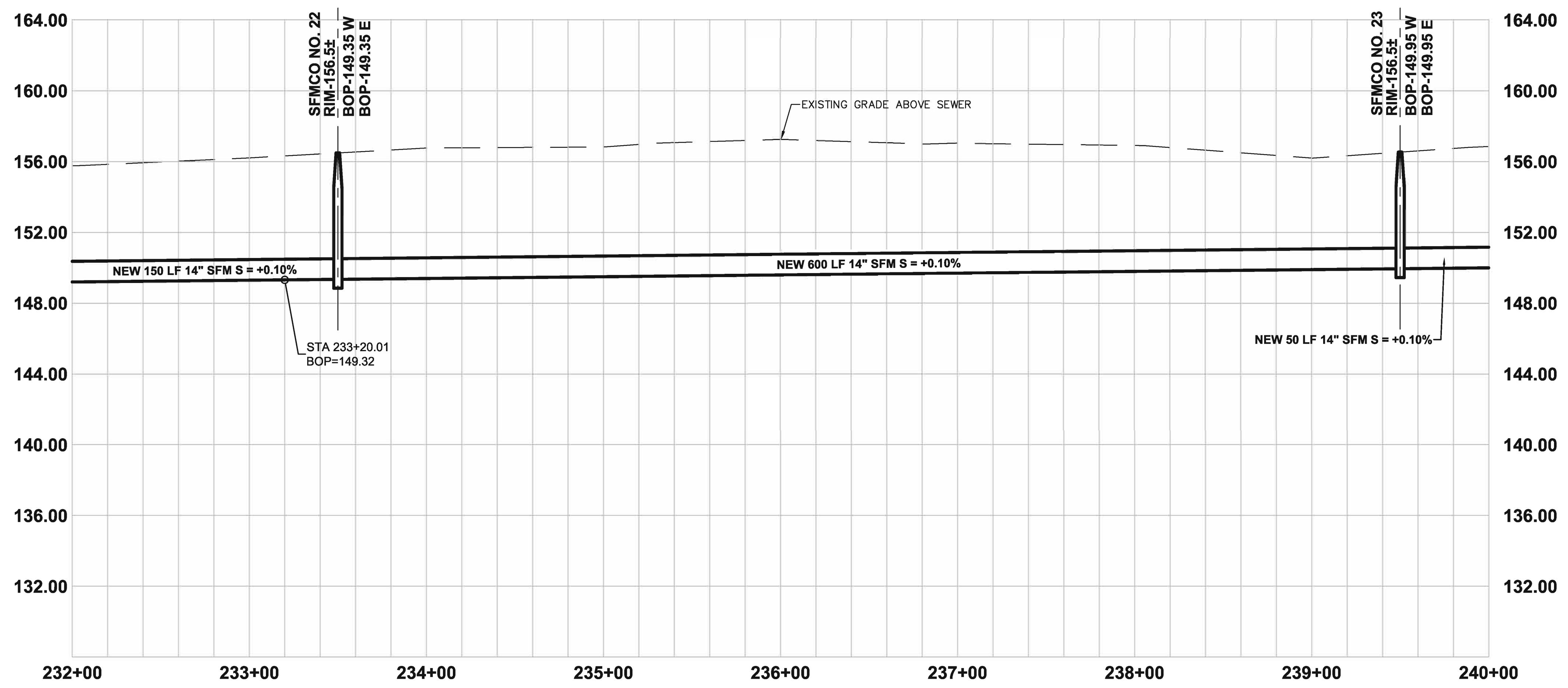
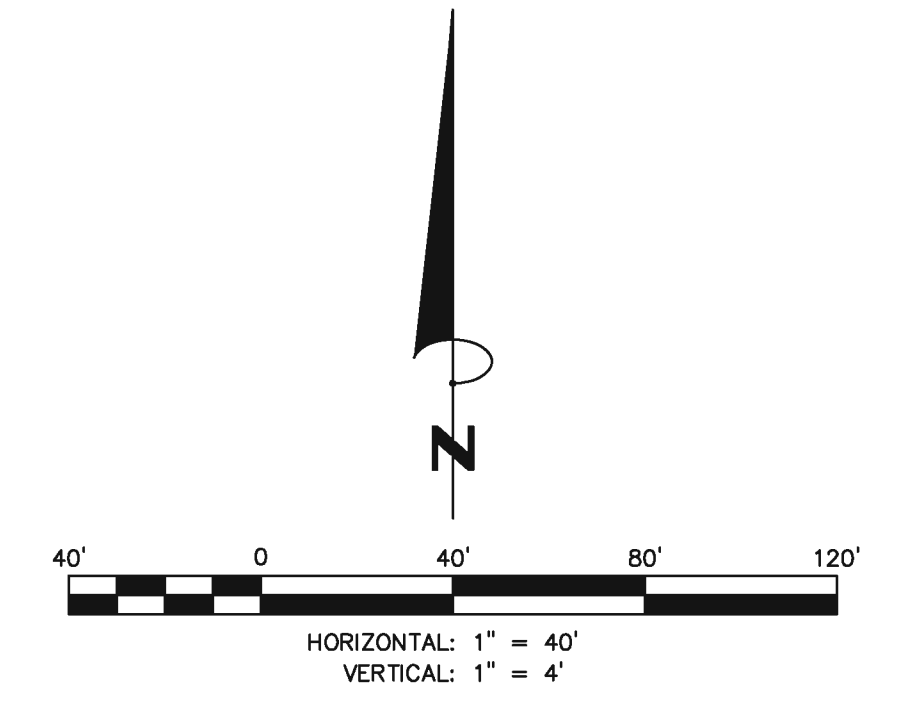
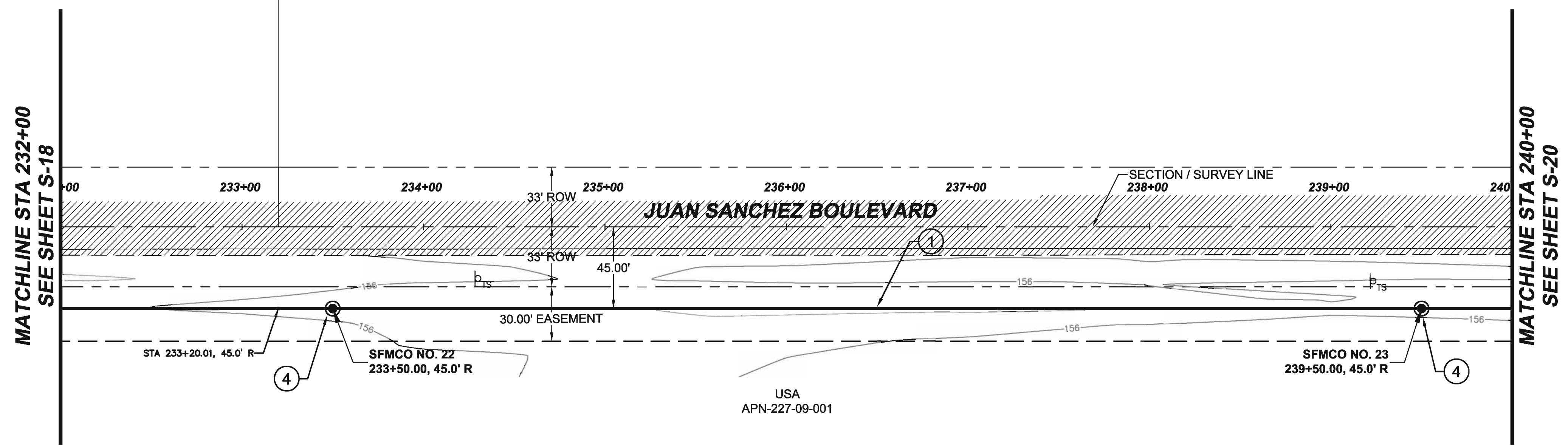
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JUAN SANCHEZ BOULEVARD - STA 208+00 TO 216+00

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DATE: AUG 2016
SURVEYED BY: M.A.C.
DRAWN BY: J.M.G.
DESIGNED BY: C.D.R.
CHECKED BY: K.A.D.
PROJECT NO.: 13033



CONSTRUCTION NOTES			UNIT	QTY
1	14" CLASS 235 DR 18 PVC PIPE		LF	800
4	FORCE MAIN PRESSURE CLEANOUT		EA	2

NOTE: INSTALL NEW STRIPING AND PAVEMENT MARKINGS AS REQUIRED

UTILITY DISCLAIMER

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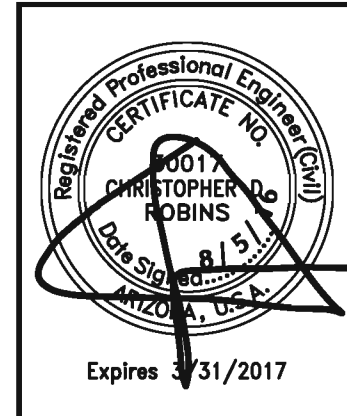


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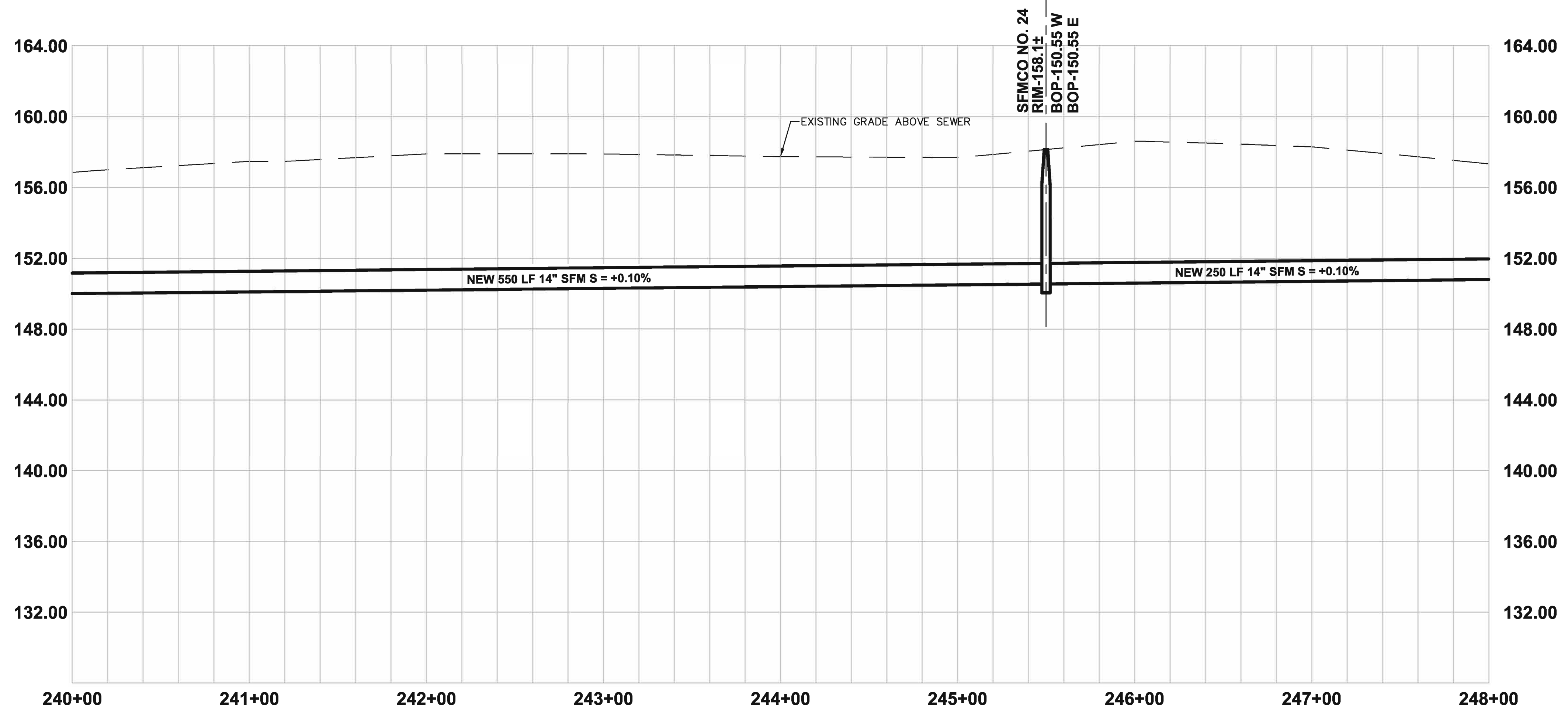
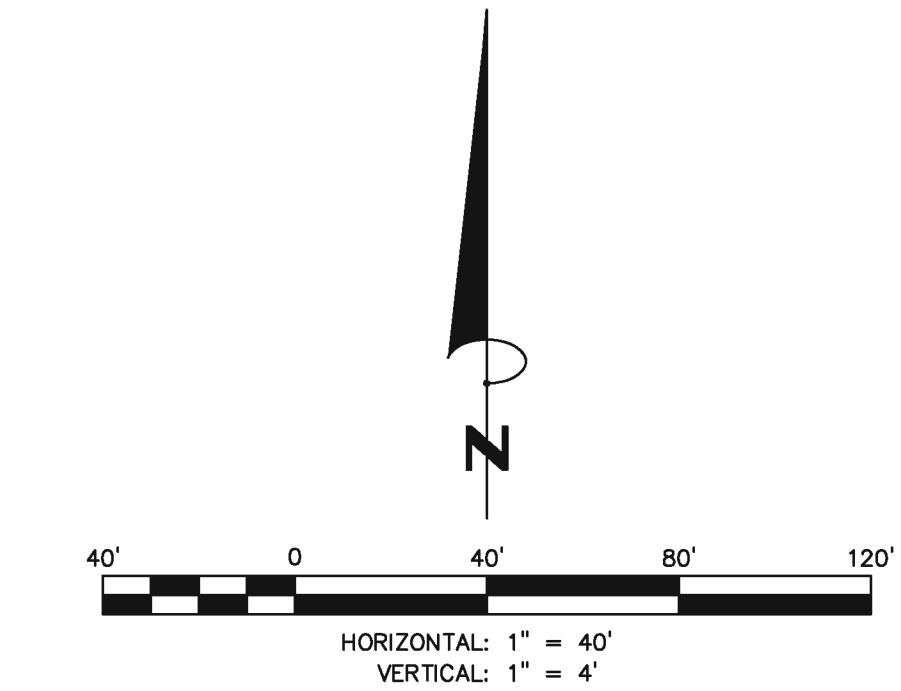
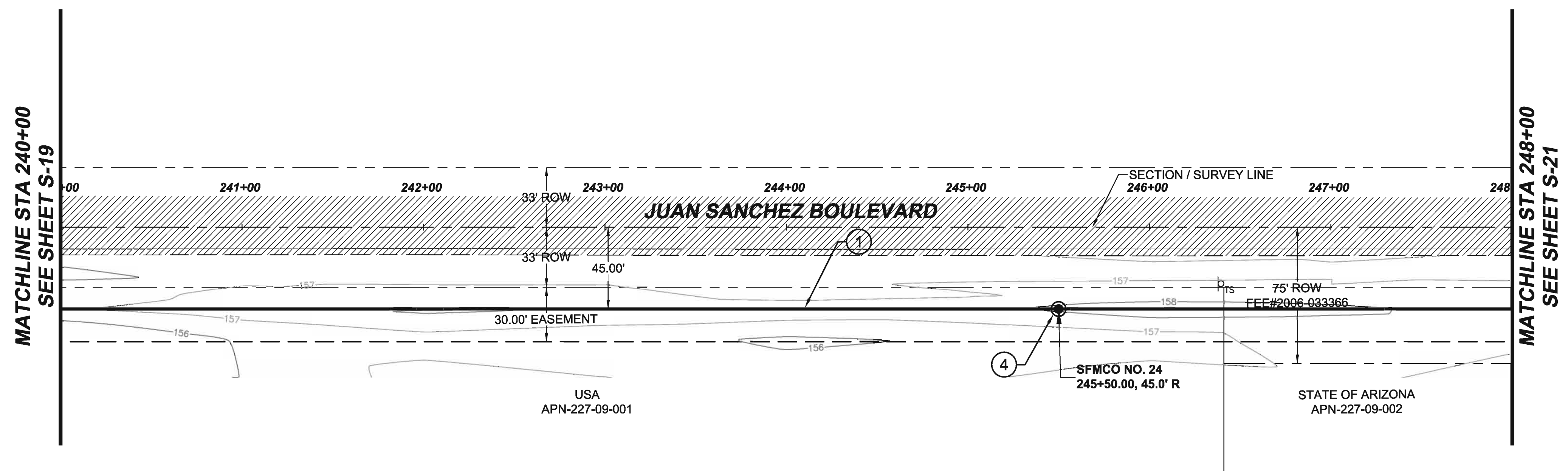
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JUAN SANCHEZ BLVD LIFT STATION
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Expires 3/31/2017

DATE:	AUG 2016
SURVEYED BY:	M.A.C.
DRAWN BY:	J.M.G.
DESIGNED BY:	C.D.R.
CHECKED BY:	K.A.D.
PROJECT NO.:	13033



CONSTRUCTION NOTES			UNIT	QTY
1	14" CLASS 235 DR 18 PVC PIPE	LF	800	
4	FORCE MAIN PRESSURE CLEANOUT	EA	1	

NOTE: INSTALL NEW STRIPING AND PAVEMENT MARKINGS AS REQUIRED

UTILITY DISCLAIMER

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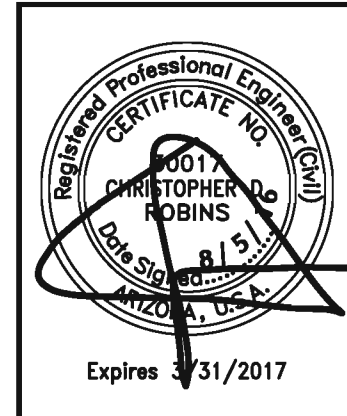


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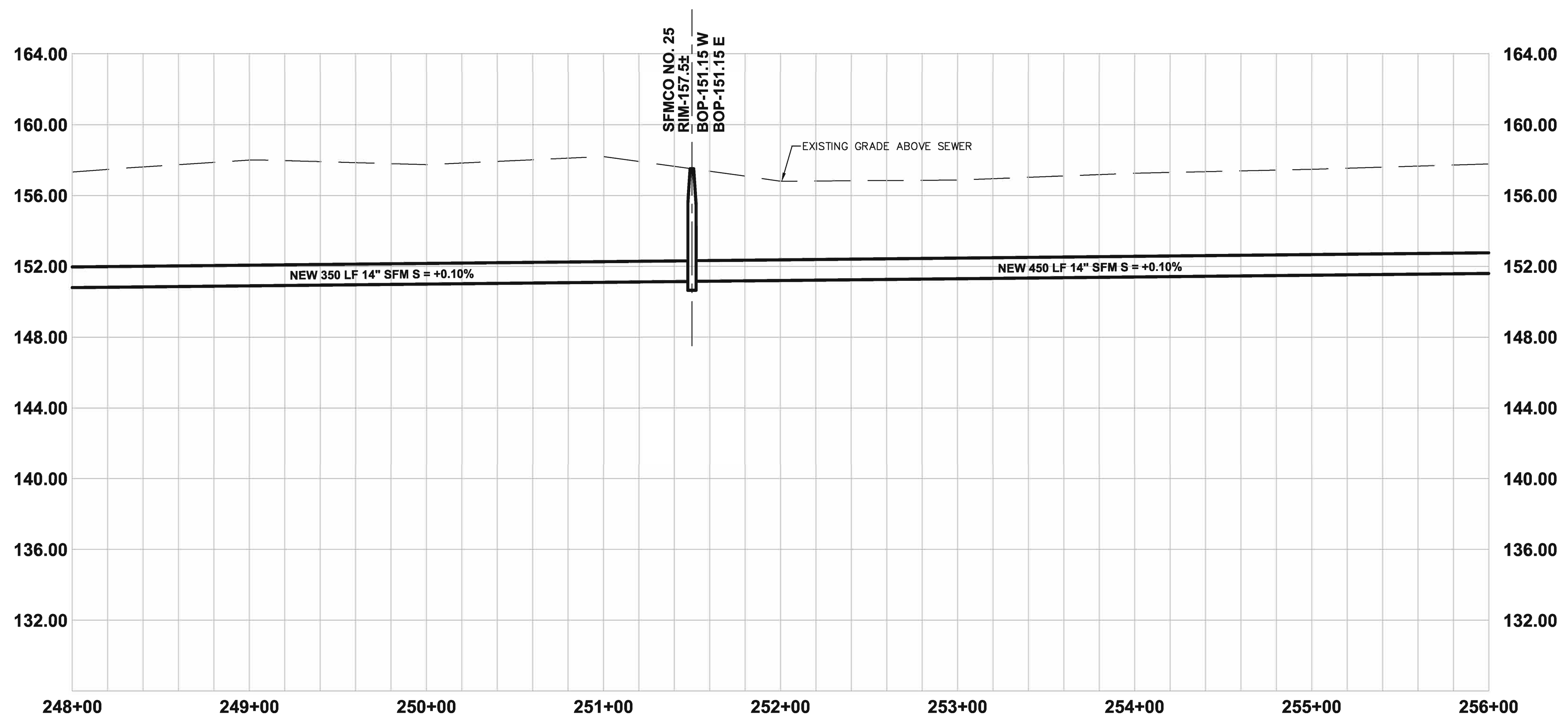
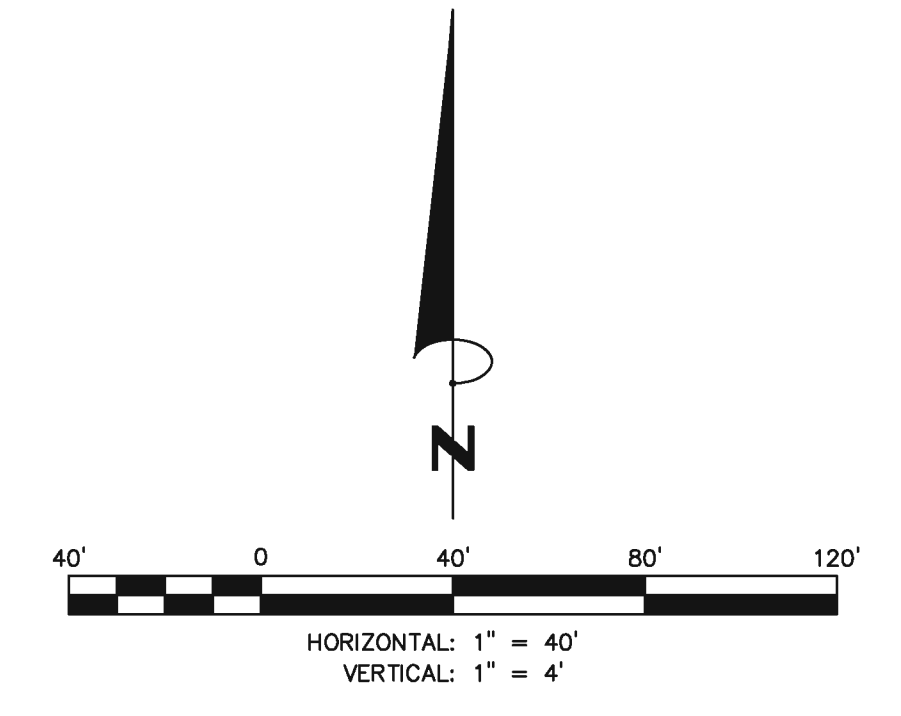
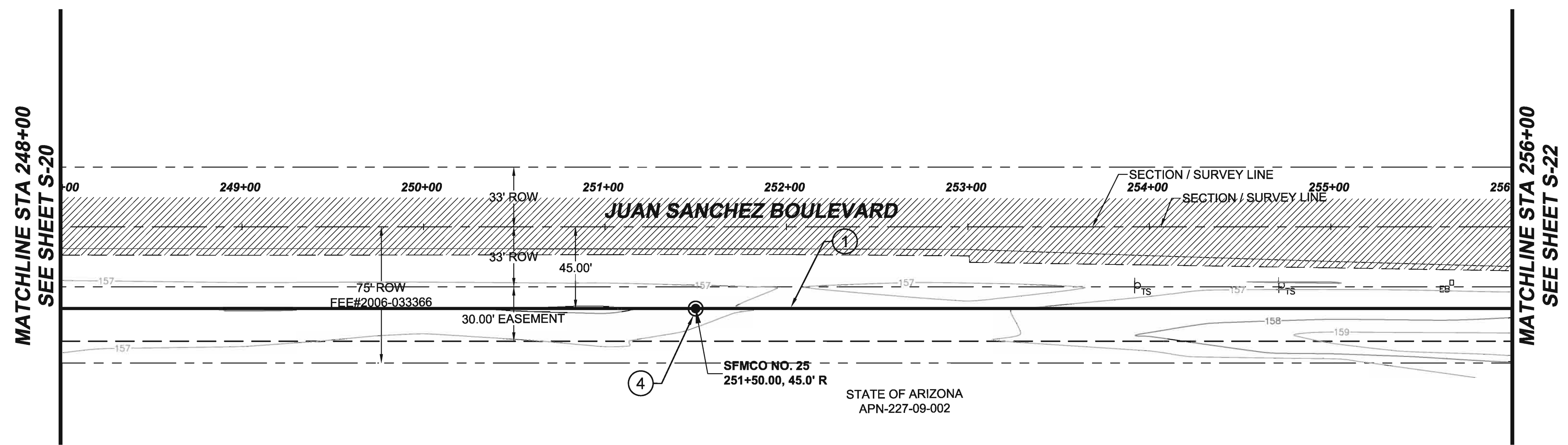
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DATE:	AUG 2016
SURVEYED BY:	M.A.C.
DRAWN BY:	J.M.G.
DESIGNED BY:	C.D.R.
CHECKED BY:	K.A.D.
PROJECT NO.:	13033
SHEET	S-20

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CONSTRUCTION NOTES			UNIT	QTY
1	14" CLASS 235 DR 18 PVC PIPE		LF	800
4	FORCE MAIN PRESSURE CLEANOUT		EA	1

NOTE: INSTALL NEW STRIPING AND PAVEMENT MARKINGS AS REQUIRED

UTILITY DISCLAIMER

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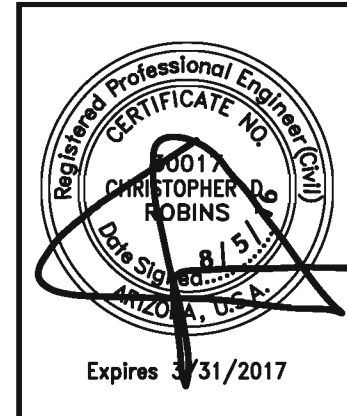
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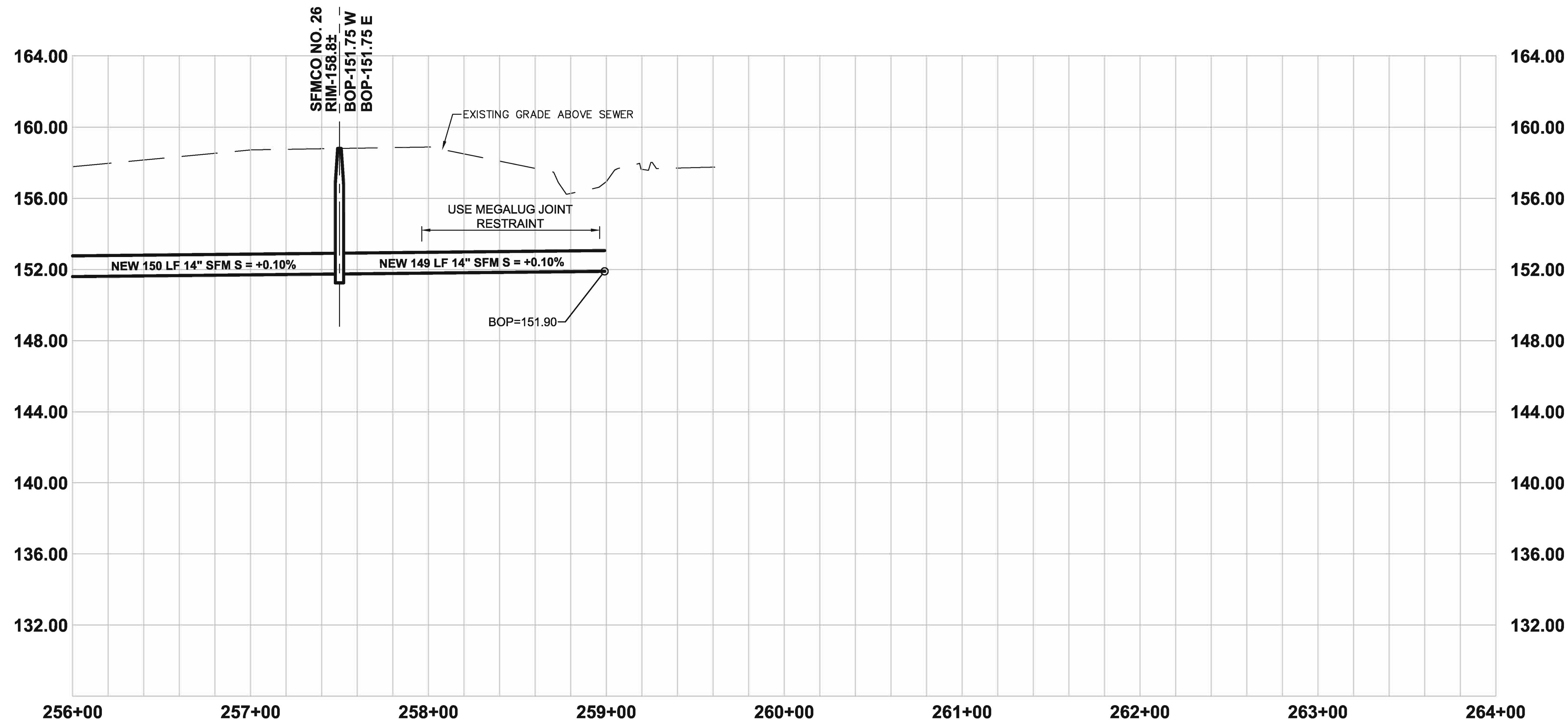
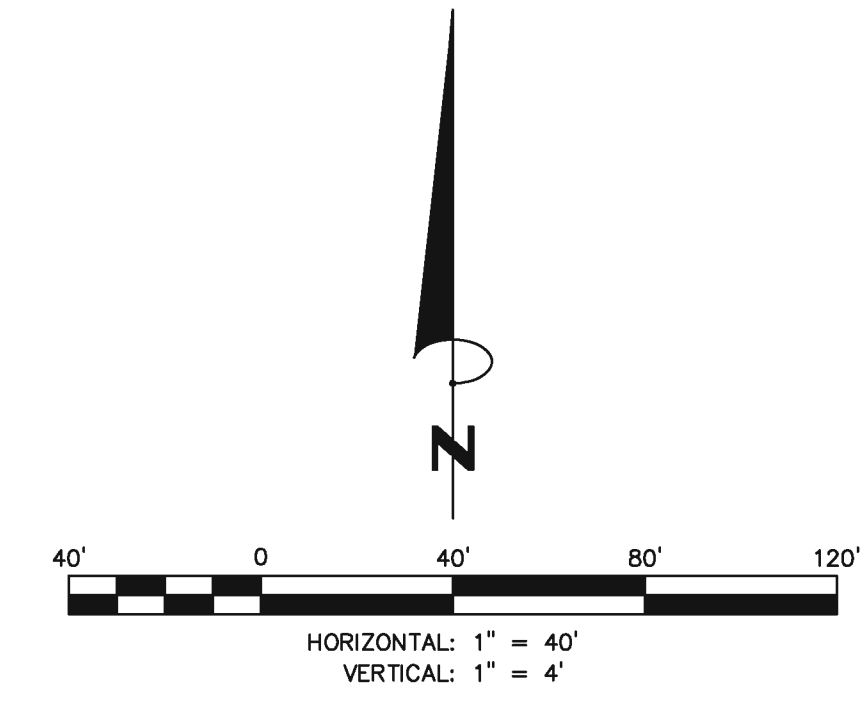
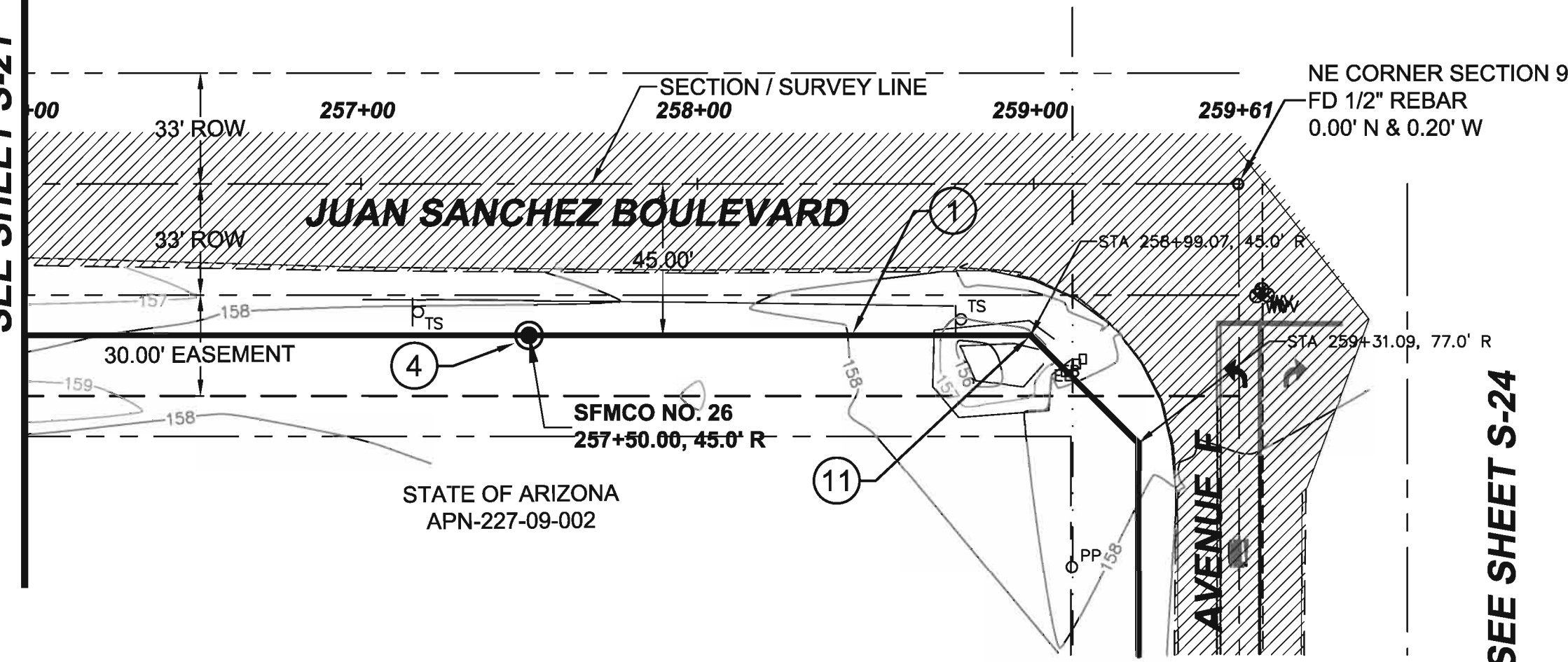
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Expires 3/31/2017

DATE:	AUG 2016
SURVEYED BY:	M.A.C.
DRAWN BY:	J.M.G.
DESIGNED BY:	C.D.R.
CHECKED BY:	K.A.D.
PROJECT NO.:	13033

MATCHLINE STA 256+00
SEE SHEET S-21



CONSTRUCTION NOTES		UNIT	QTY
1	14" CLASS 235 DR 18 PVC PIPE	LF	299
4	FORCE MAIN PRESSURE CLEANOUT	EA	1
11	14" 45° BEND - HORIZONTAL	EA	1

NOTE: INSTALL NEW STRIPING AND PAVEMENT MARKINGS AS REQUIRED

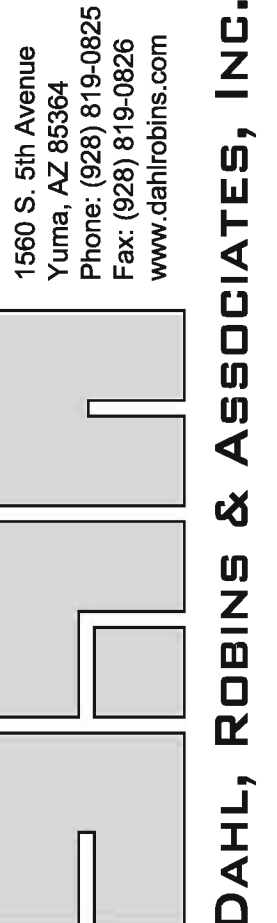
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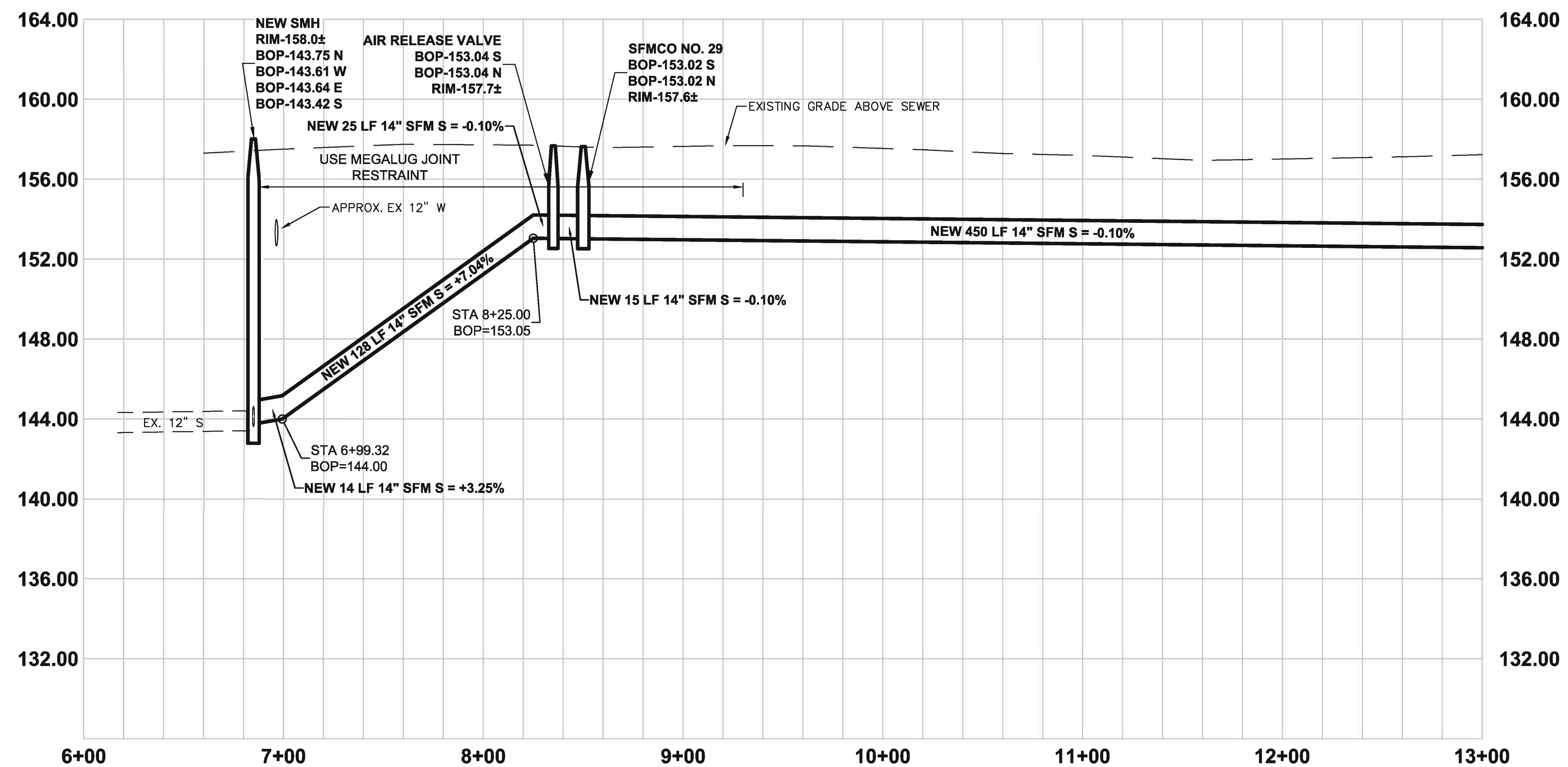
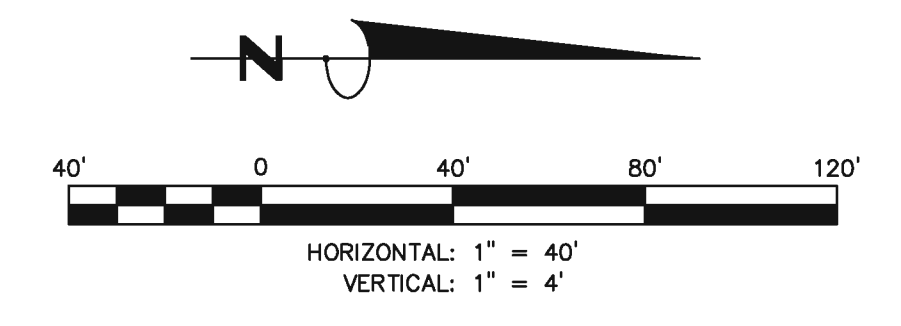
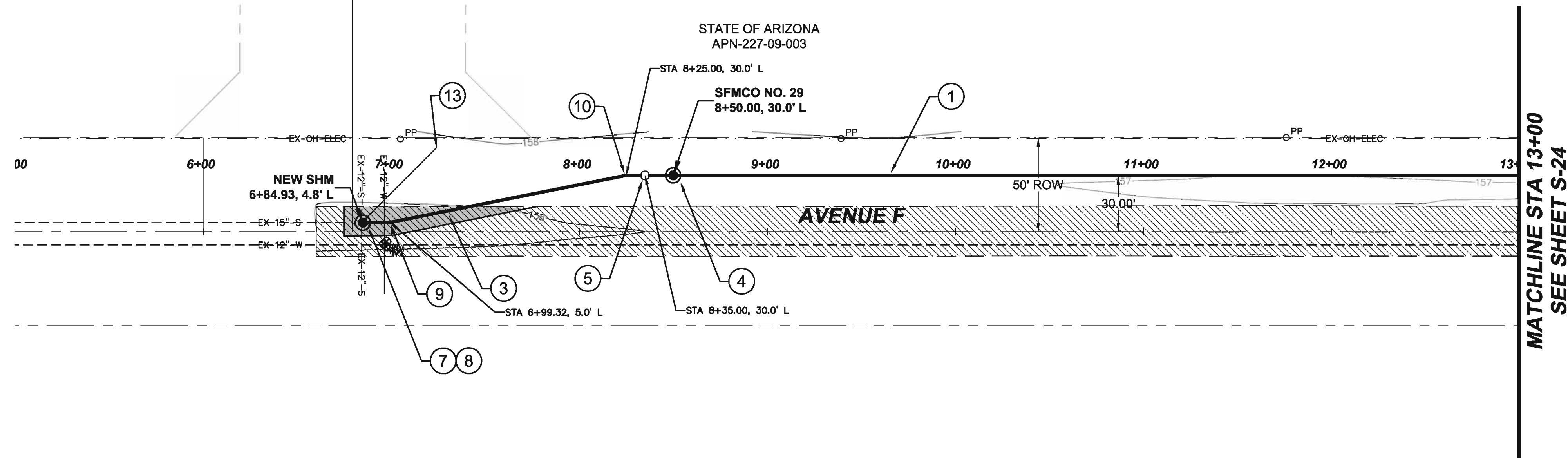
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CITY OF SAN LUIS
JUAN SANCHEZ BLVD LIFT STATION
SEWER PLAN AND PROFILE
JUAN SANCHEZ BOULEVARD - STA 256+00 TO 259+61



DATE: AUG 2016
SURVEYED BY: M.A.C.
DRAWN BY: J.M.G.
DESIGNED BY: C.D.R.
CHECKED BY: K.A.D.
PROJECT NO.: 13033
SHEET



	CONSTRUCTION NOTES	UNIT	QTY
1	14" CLASS 235 DR 18 PVC PIPE	LF	632
3	PAVEMENT REPLACEMENT - TYPE "B"	SY	110
4	FORCE MAIN PRESSURE CLEANOUT	EA	1
5	SEWAGE AIR RELEASE VALVE	EA	1
7	6' DIAMETER PRECAST STEEL REINFORCED POLYMER CONCRETE FORCE MAIN DISCHARGE MANHOLE AS SUPPLIED BY U.S. COMPOSITE OR ENGINEERING APPROVED EQUAL - CONTRACTOR TO PROVIDE SHOP DRAWINGS	EA	1
8	ADJUST MANHOLE FRAME AND COVER TO FINAL GRADE	EA	1
9	14" 11 1/2° BEND - HORIZONTAL	EA	1
10	14" 11 1/2° BEND - VERTICAL	EA	1
13	2" SCHEDULE 80 PVC PIPE STUBBED AND CAPPED	LF	55

NOTE: INSTALL NEW STRIPING AND PAVEMENT MARKINGS AS REQUIRED

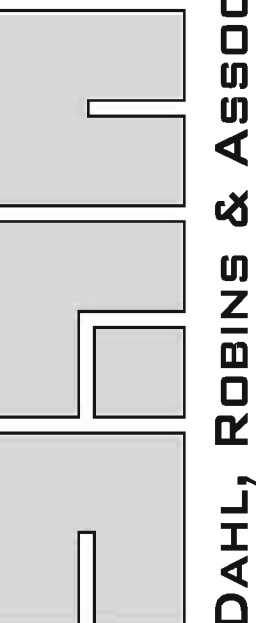
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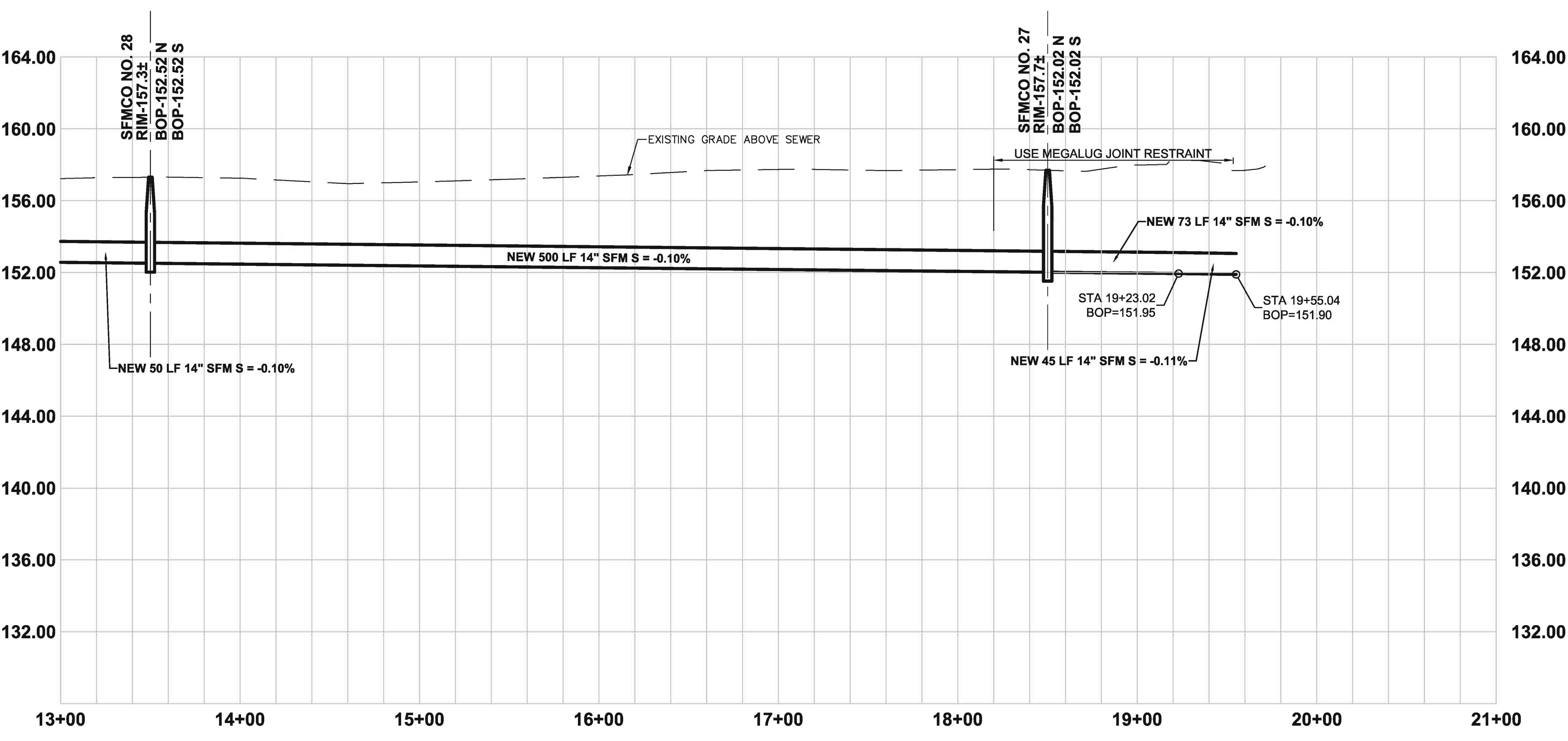
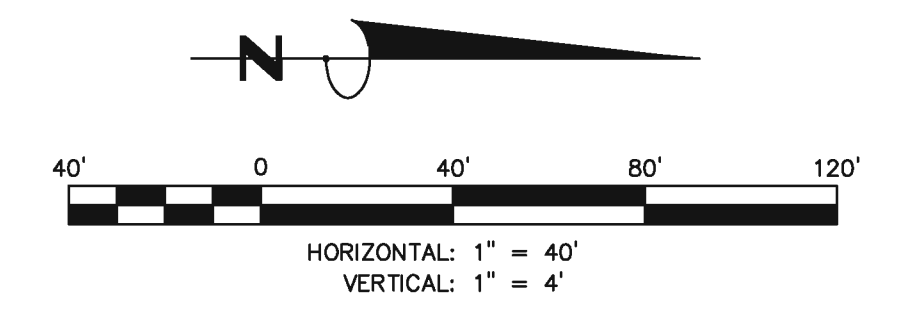
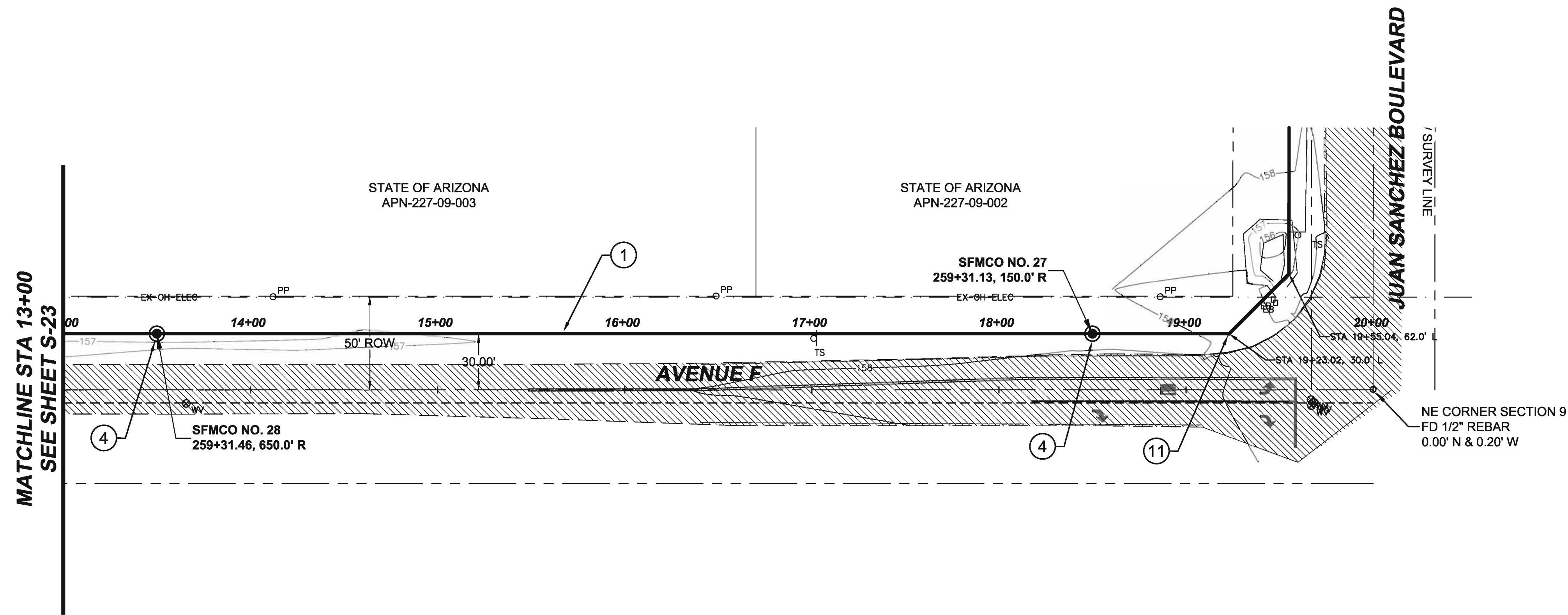


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CITY OF SAN LUIS
JUAN SANCHEZ BLVD LIFT STATION
SEWER PLAN AND PROFILE
AVENUE F - STA 5+00 TO 13+00



DATE: AUG 2016
SURVEYED BY: M.A.C.
DRAWN BY: J.M.G.
DESIGNED BY: C.D.R.
CHECKED BY: K.A.D.
PROJECT NO.: 13033
SHEET



CONSTRUCTION NOTES			UNIT	QTY
1	14" CLASS 235 DR 18 PVC PIPE		LF	668
4	FORCE MAIN PRESSURE CLEANOUT		EA	2
11	14" 45° BEND - HORIZONTAL		EA	1

NOTE: INSTALL NEW STRIPING AND PAVEMENT MARKINGS AS REQUIRED

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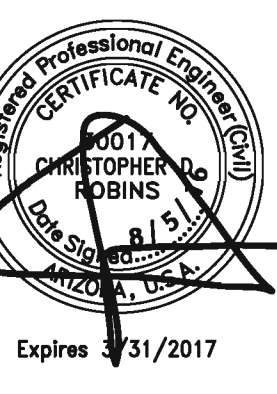


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AVENUE F - STA 13+00 TO 20+00

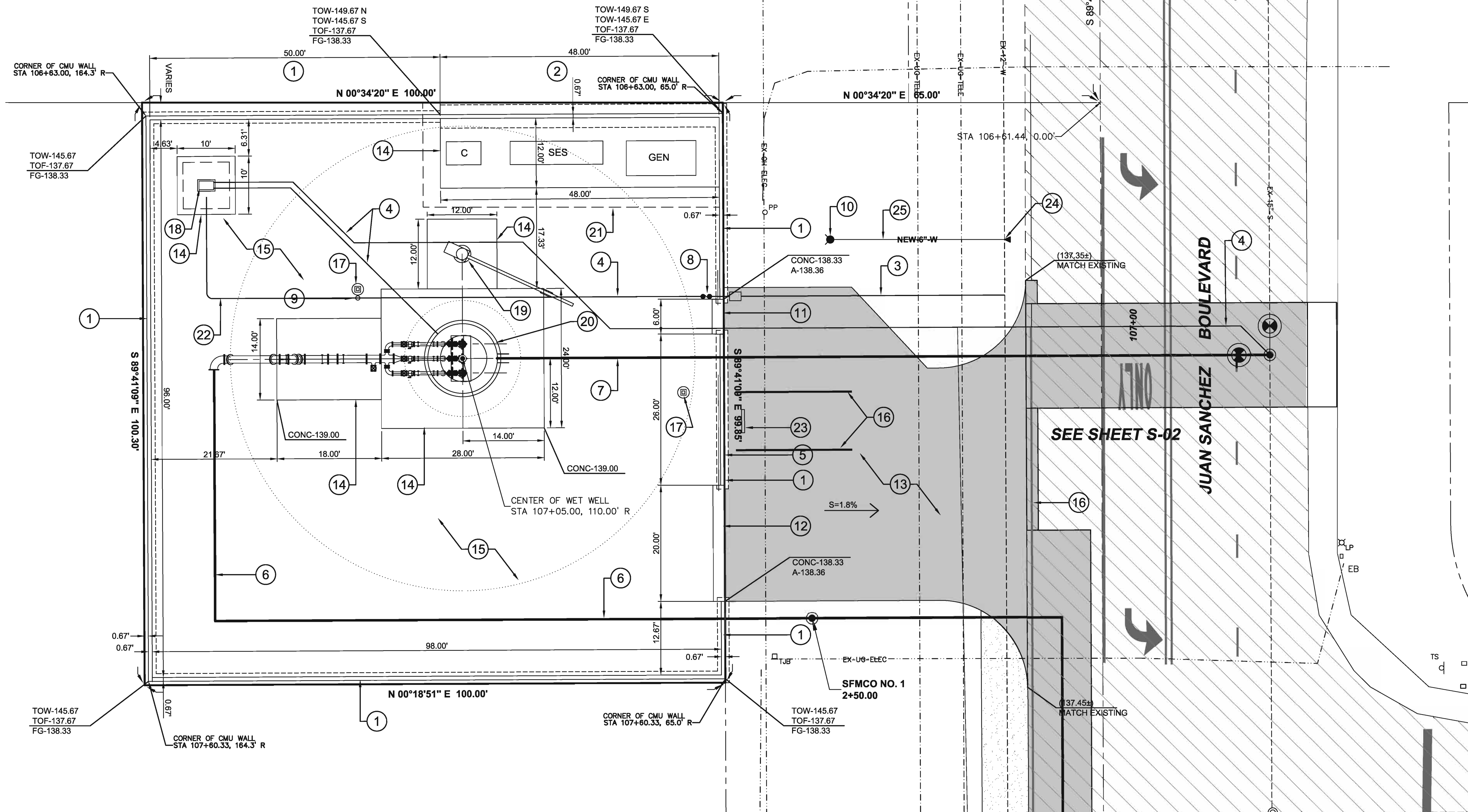
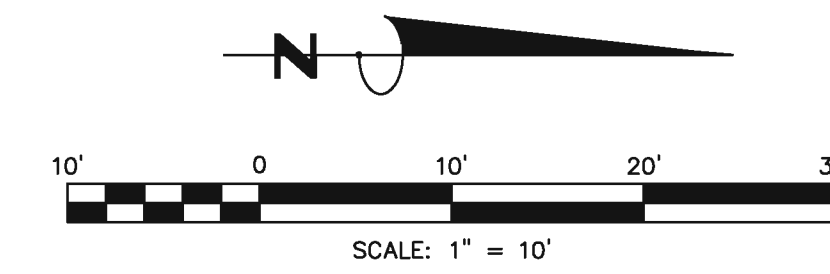


DATE:	AUG 2016
SURVEYED BY:	M.A.C.
DRAWN BY:	J.M.G.
DESIGNED BY:	C.D.R.
CHECKED BY:	K.A.D.
PROJECT NO.:	13033
SHEET	S-24

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6TH AVENUE

NW CORNER SECTION 7
FD BUREAU OF RECLAMATION BRASS CAP IN HANDHOLE
0.03' S & 0.08' E



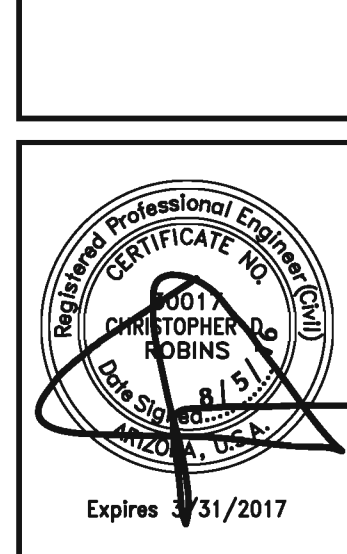
CONSTRUCTION NOTES	
1	8' HIGH 8" SPLIT FACE TAN CMU WALL
2	12' HIGH 8" SPLIT FACE TAN CMU WALL
3	2" WATER SERVICE WITH WATER METER BOX AND 2" WATER METER
4	2" SCHEDULE 80 PVC PIPE
5	WARNING SIGN WITH NAME AND 24 HOUR EMERGENCY PHONE NUMBER OF THE OWNER OR OPERATOR
6	14" CLASS 235 DR 18 PVC PIPE
7	18" SDR 35 PVC PIPE
8	2" REDUCED PRESSURE ASSEMBLY
9	3/4" HOSE BIBB
10	NEW FIRE HYDRANT
11	8' DECORATIVE WOOD AND METAL PERSONNEL SWING GATE - CONTRACTOR TO PROVIDE SHOP DRAWINGS
12	20' DECORATIVE WOOD AND METAL VEHICLE ROLL GATE - CONTRACTOR TO PROVIDE SHOP DRAWINGS
13	ASPHALTIC CONCRETE DRIVEWAY ENTRANCE- SEE STRUCTURAL SECTION NO.1
14	12" THICK CLASS A PORTLAND CEMENT CONCRETE SLAB WITH #4 REBAR AT 12" O.C. EACH WAY TOP AND BOTTOM OVER 6" SUBGRADE COMPACTED TO 95% MINIMUM - SEE STRUCTURAL SECTION NO. 2
15	4" ABC COMPACTED TO 95% MINIMUM OVER 8" SUBGRADE COMPACTED TO 95% MINIMUM - SEE STRUCTURAL SECTION NO. 3
16	4" WIDE WHITE PAINT STRIPE
17	LIGHT POLE - SEE ELECTRICAL PLANS
18	HYDROXYL RADICAL FOG ODOR CONTROL SYSTEM VAPEX O-MEGA 1500 WITH 8' X 8' TUFF SHED WITH A/C UNIT
19	FIXED 2 TON ABELL-HOWE MODEL # J-904F UNIT WITH ELECTRICAL WINCH CONTROLS HEIGHT = 12', LENGTH = 25' - CONTRACTOR TO PROVIDE SHOP DRAWINGS
20	LIFT STATION
21	NEW 18' X 51' X 14' STEEL SHADE STRUCTURE -CONTRACTOR TO PROVIDE SHOP DRAWINGS
22	1/2" SCHEDULE 80 PVC PIPE
23	PRECAST CONCRETE PARKING BUMPER
24	NEW 12" X 12" X 6" TAPPING SLEEVE WITH THRUST BLOCK, GATE VALVE, ANCHOR AND VALVE BOX AND COVER
25	NEW 6" CLASS 150 C900 PVC WATERLINE

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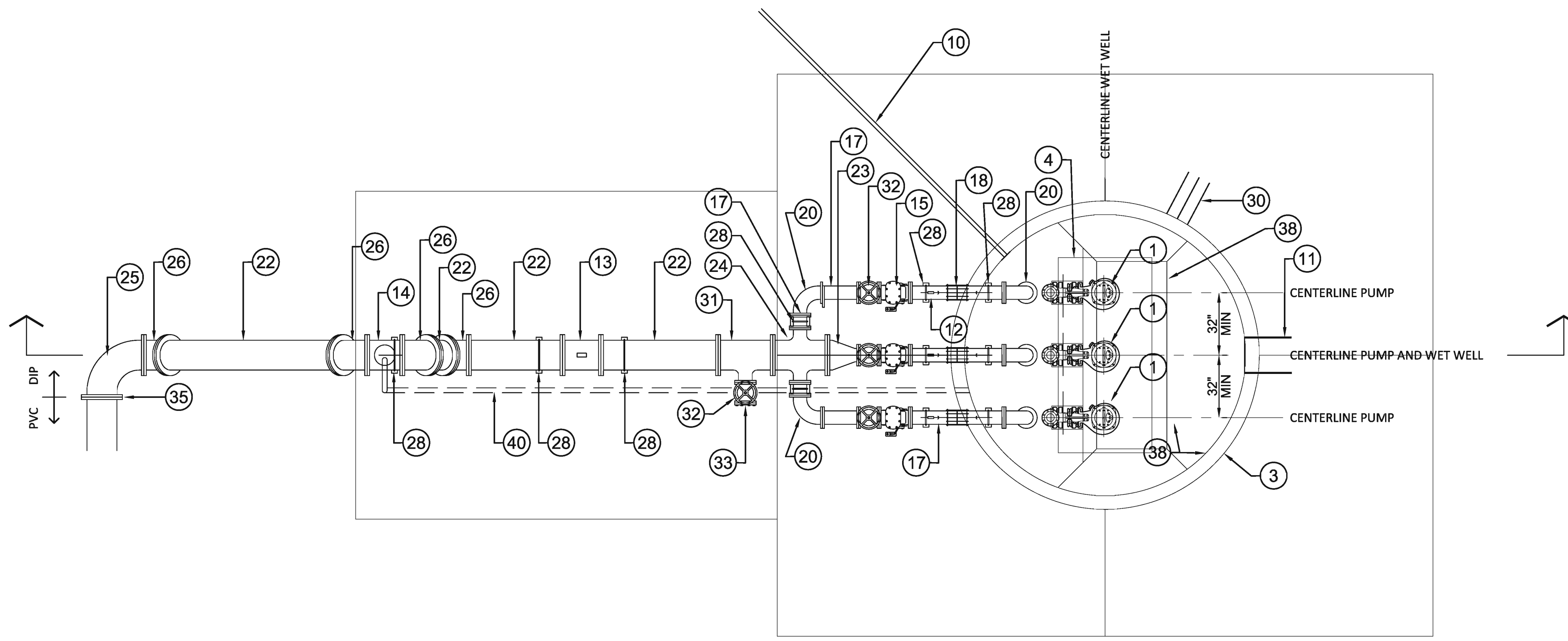
DATE: AUG 2016
SURVEYED BY: M.A.C.
DRAWN BY: J.M.G.
DESIGNED BY: C.D.R.
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PROJECT NO.: 13033
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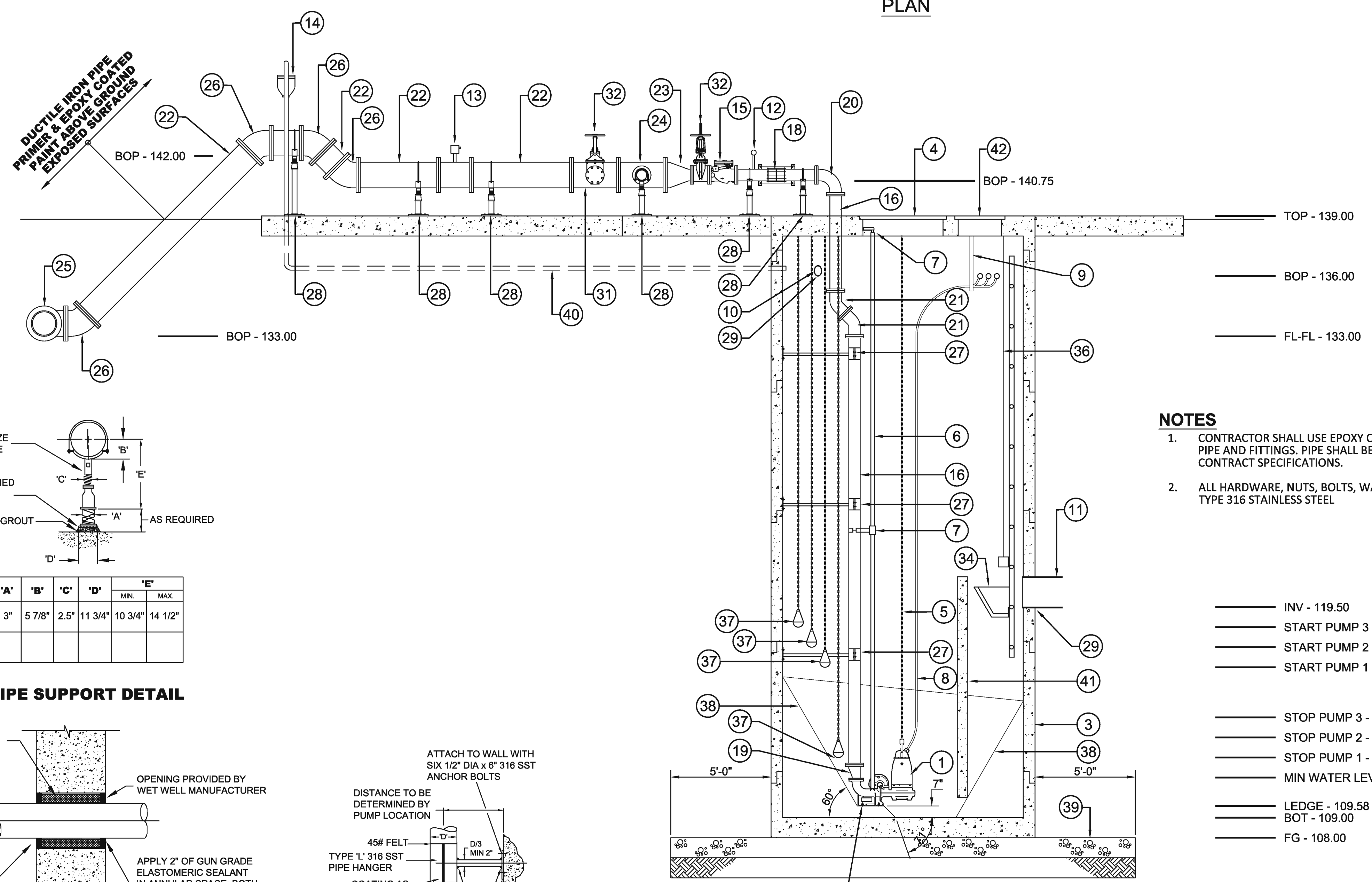


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PLAN

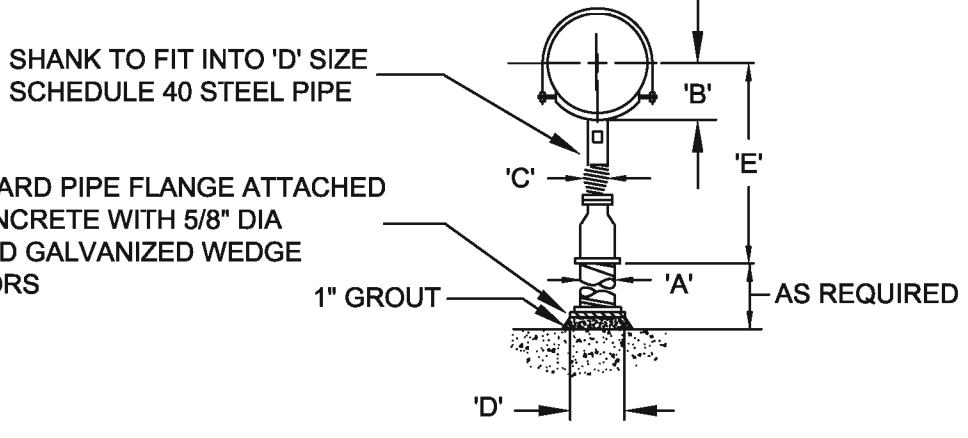


SECTION

CONSTRUCTION NOTES	
1	FLYGT SUBMERSIBLE PUMP MODEL NP 3153 HT 3" 462 WITH MIX-FLUSH VALVE, 4" DISCHARGE, 276 MM IMPELLER CODE 462 HT, 20 HP, 460 V, 1,755 RPM, 3 PHASE, 60 HZ, EXPLOSION PROOF CASE (CLASS 1, GROUP D)
2	PUMP ANCHOR BOLTS PER MANUFACTURER (316 SST)
3	144" DIAMETER PRECAST STEEL REINFORCED POLYMER CONCRETE WET WELL RISER, BASE AND COVER SECTIONS WITH BAFFLE - AS SUPPLIED BY U.S. COMPOSITE OR ENGINEERING APPROVED EQUAL - CONTRACTOR TO PROVIDE SHOP DRAWINGS
4	TRIPLEX ALUMINUM ACCESS COVERS WITH SAFETY GRATES 100" x 52" CLEAR OPENING EMBEDDED IN CONCRETE COVER - VERIFY SIZE
5	LIFTING CABLE ATTACHMENT PER PUMP MANUFACTURER (316 SST)
6	2" DIA INTERMEDIATE GUIDE BAR PER PUMP MANUFACTURER (316 SST)
7	INTERMEDIATE GUIDE BAR BRACKETS PER MANUFACTURER (316 SST)
8	ELECTRIC POWER CABLE - SIZE PER MANUFACTURER AND ELECTRICAL PLAN
9	U-SHAPED CABLE HANGER MADE FROM 1/2" PIPE, STRAPS INCLUDED (SST)
10	2" SCHEDULE 80 PVC FOR VAPEX
11	18" SDR 35 PVC INLET PIPE
12	PRESSURE GAUGE ASSEMBLY WITH RISER AND ISOLATION VALVE
13	14" ELECTROMAGNETIC FLOW METER BADGER METER M-SERIES M2000 WITH JUNCTION BOX FOR REMOTE M2000 AMPLIFIER
14	2" A.R.I. SINGLE BODY SEWAGE COMBINATION AIR VALVE APCO MODEL 14411461200 WITH BLOW-OFF VALVE, 2" PEC ISOLATION VALVE AND BACKFLUSH ATTACHMENT
15	6" VALMATIC SURGEBUSTER SWING TYPE CHECK VALVE
16	6" FLANGED SPOOL (316 SST)
17	6" FLANGED SPOOL (DIP)
18	6" COUPLING WITH HARNESS PER AWWA M-11 AND FLG X PE JOINTS
19	6" x 4" FLANGED ECCENTRIC REDUCER (316 SST)
20	6" FLANGED 90° LONG RADIUS BEND (DIP)
21	6" FLANGED 45° BEND (316 SST)
22	14" FLANGED SPOOL (DIP)
23	14" x 6" FLANGED CONCENTRIC REDUCER (DIP)
24	14" x 14" x 6" x 6" FLANGED CROSS (DIP)
25	14" FLANGED 90° LONG RADIUS BEND (DIP)
26	14" FLANGED 45° BEND (DIP)
27	PIPE SWAY BRACE PER DETAIL
28	PIPE SUPPORT PER DETAIL
29	WALL PENETRATION SEAL PER DETAIL
30	2" ELECTRIC CONDUITS - SIZE PER MANUFACTURER AND ELECTRICAL PLAN
31	14" x 14" x 6" FLANGED TEE (DIP)
32	6" FLANGED GATE VALVE WITH OUTSIDE STEM AND YOKE
33	6" BLIND FLANGE (DIP)
34	HALLIDAY PRODUCTS SERIES B1B TRASH BASKET
35	14" DIP/PVC ADAPTOR
36	MILTRONICS SENSOR HYDRORANGER
37	ITT FLYGT LIQUID LEVEL SENSOR AND CABLE FOR FLOAT BACKUP TO BE SET BY PUMP MANUFACTURER
38	GROUT DESIGN - PER PUMP MANUFACTURER
39	12" ABC LEVEL AND COMPACTED TO 100% MINIMUM OVER 12" SUBGRADE COMPACTED TO 95% MINIMUM
40	2" SCHEDULE 80 DISCHARGE LINE
41	PRECAST REINFORCED POLYMER CONCRETE INFLUENT BAFFLE - CONTRACTOR TO PROVIDE SHOP DRAWING - DESIGN PER PUMP MANUFACTURER
42	ALUMINUM ACCESS COVER WITH SAFETY GRATES 30" x 30" CLEAR OPENING EMBEDDED IN CONCRETE COVER - VERIFY SIZE

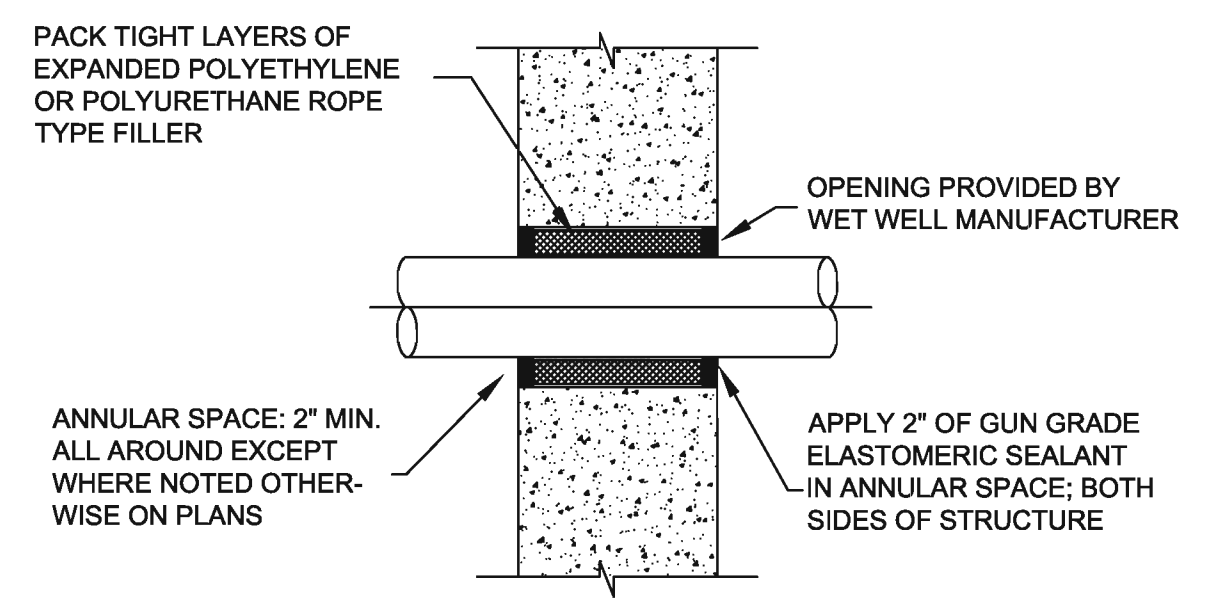
NOTES

- CONTRACTOR SHALL USE EPOXY COATED AND LINED DUCTILE IRON PIPE AND FITTINGS. PIPE SHALL BE FLANGED AND MEET ALL CONTRACT SPECIFICATIONS.
- ALL HARDWARE, NUTS, BOLTS, WASHERS INSIDE VAULT ARE TO BE TYPE 316 STAINLESS STEEL

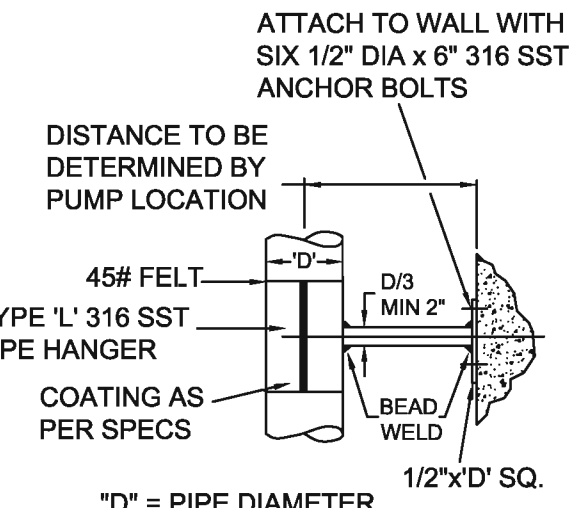


NUMBER REQUIRED	SUPPORTED PIPE SIZE	'A'	'B'	'C'	'D'	'E'	
						MIN.	MAX.
8	6"	3"	5 7/8"	2.5"	11 3/4"	10 3/4"	14 1/2"
3	14"						

PIPE SUPPORT DETAIL



WALL PENETRATION SEAL DETAIL



PIPE SWAY BRACE DETAIL

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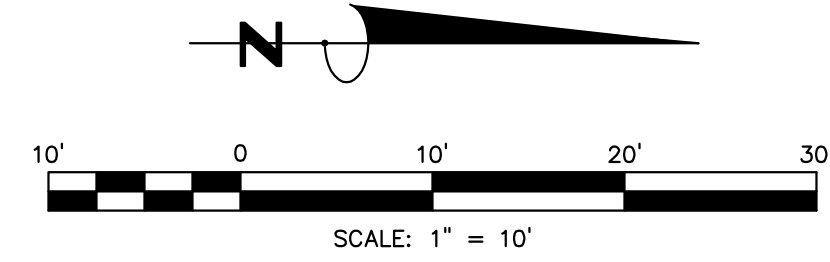
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**CITY OF SAN LUIS
JUAN SANCHEZ BLVD LIFT STATION
LIFT STATION
PLAN AND SECTION**

Professional Engineer
C. D. ROBINSON
No. 1000
Expires 3/31/2017

DATE: AUG 2016
SURVEYED BY: M.A.C.
DRAWN BY: J.M.G.
DESIGNED BY: C.D.R.
CHECKED BY: K.A.D.
PROJECT NO.: 13033
SHEET LS-02

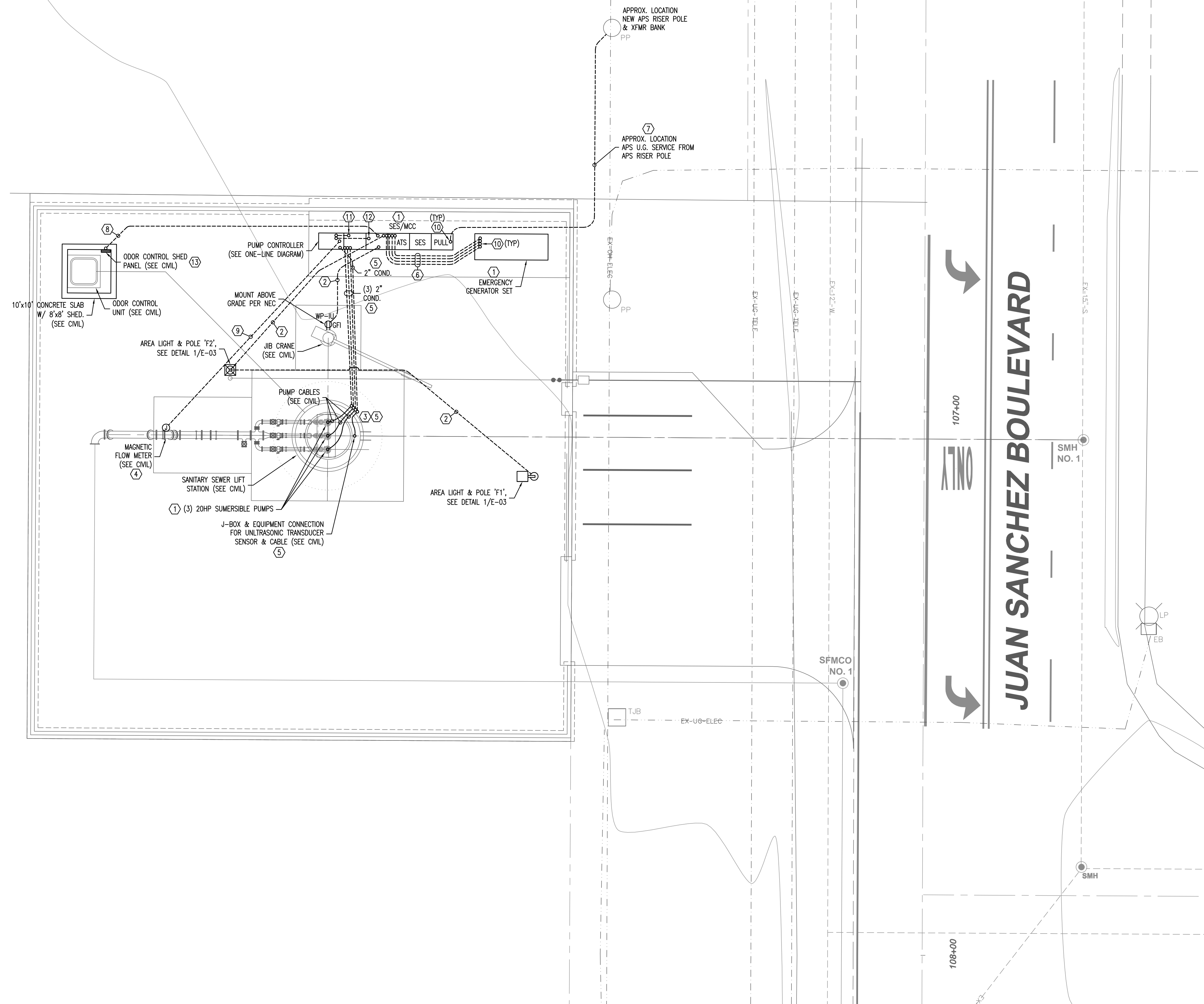


ELECTRICAL GENERAL NOTES:

1. ALL MATERIALS AND WORKMANSHIP TO BE NEW AND OF FIRST RATE QUALITY. MATERIALS TO BE UL LISTED AND APPROVED. ALL MATERIALS AND EQUIPMENT SHALL BE INSTALLED IN COMPLIANCE WITH THE CURRENT ADOPTED EDITION OF THE NATIONAL ELECTRICAL CODE AND ANY OTHER STATE AND LOCAL APPLICABLE CODES.
2. ALL CEILING, FLOOR, AND WALL PENETRATIONS SHALL BE CAULKED/SEALED TO PRESERVE FIRE RATINGS AND WATER PROOF INTEGRITY. FIRESTOPPING OF PENETRATIONS THROUGH FIRE RATED FLOORS, CEILINGS & WALLS SHALL BE IN ACCORDANCE WITH IBC & UL AND AS REQUIRED BY THE FIRESTOPPING MANUFACTURER FOR THE CONSTRUCTION TYPE & FIRE RATING SPECIFIED (SEE CIVIL DRAWINGS). THE FIRESTOPPING SYSTEM SHALL BE LISTED AND TESTED TO UL-1479 & ASTM E-814. INSTALL IN STRICT COMPLIANCE WITH THE MANUFACTURER INSTRUCTIONS.
3. ALL ELECTRICAL CONDUCTORS SHALL BE COPPER, 90 DEGREE C TEMPERATURE RATING, MINIMUM SIZE IS NO. 12 AWG. ALL WIRING SHALL BE IN CONDUIT UNLESS OTHERWISE NOTED ON THE DRAWINGS. UNDERGROUND CONDUCTORS MUST BE RATED FOR 90 DEGREE C AS DEFINED FOR "WET LOCATION" BY THE NEC UNLESS NOTED OTHERWISE.
- 4.a. ALL CONDUIT SHALL BE METALLIC ELECTRICAL CONDUIT UNLESS NOTED OTHERWISE ON THE DRAWINGS. MINIMUM SIZE CONDUIT IS 1/2".
 b. UNDERGROUND CONDUIT SHALL BE MINIMUM OF SCHEDULE 40 PVC, 90 DEGREE C. RATED WITH MINIMUM OF TRENCH COVER PER NEC TABLE 300-5. ALL UNDERGROUND JUNCTION/PULL BOXES SHALL BE RATED THE SAME AS THE ASSOCIATED CONDUIT, MINIMUM SIZE UNDERGROUND CONDUIT IS 3/4".
5. THE ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR THE COORDINATION OF CONDUIT, WIRING, ELECTRICAL EQUIPMENT AND ASSOCIATED HARDWARE WITH THE INSTALLATION OF THE MECHANICAL EQUIPMENT AND OTHER TRADES. SEE THE CIVIL PLANS FOR EXACT LOCATIONS.
6. THE ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR COORDINATION AND INSTALLATION OF SERVING ELECTRICAL TELEPHONE/TV COMPANY CONDUIT SYSTEMS AND SERVICE EQUIPMENT. UNDERGROUND TRENCH LOCATIONS SHOWN ARE APPROXIMATE AND MUST BE VERIFIED BY THE SERVING UTILITY. CONTACT WITH THE SERVING UTILITIES IS REQUIRED PRIOR TO INSTALLATION. THE CONTRACTOR IS RESPONSIBLE FOR EXISTING FIELD CONDITIONS AND PROVIDING A FULL LIGHTNING ELECTRICAL SYSTEM.
7. ALL LIGHT FIXTURES, RECEPTACLE AND JUNCTION BOXES, PANEL BOARDS AND ALL OTHER METALLIC ELECTRICAL APPLIANCES AND DEVICES MUST BE GROUNDED AS REQUIRED BY SECTION 250 OF THE NATIONAL ELECTRICAL CODE.
8. LIGHT FIXTURE SUBSTITUTIONS MUST BE OF EQUAL APPLICATION, SIZE, WEIGHT, AND APPEARANCE.
9. MATERIALS & INSTALLATION SHALL COMPLY WITH REQUIREMENTS FOR INSTALLATION IN SEISMIC ZONE 4.

KEY NOTES:

- ① SEE ELECTRICAL ONE-LINE DIAGRAM.
- ② (2) #10 CU THWN, (1) #10 CU GRD, 3/4" CONDUIT, TO PANEL AT MCC.
- ③ MOUNT NEMA-3R JUNCTION BOX, SIZE AS REQUIRED, 12" ABOVE GRADE ON 2" SCH 80 PVC CONDUIT. MOUNT APPLETON OUTLET BOX FOR CONTROLS. SEAL CONDUIT TO PREVENT GASES FROM ENTERING CONTROL PANEL. SEE ONE-LINE DIAGRAM.
- ④ WP J-BOX & CONNECTION FOR MAG METER. VERIFY LOCATION WITH CIVIL DRAWINGS. FLOW METER TO BE CONNECTED TO CONTROLLER. CONTROLLER TO METER FLOW WHEN PUMPS ARE RUNNING. SEE ONE-LINE DIAGRAM NOTES.
- ⑤ LIFT STATION EQUIPMENT CONNECTIONS, SEE ELECTRICAL ONE-LINE DIAGRAM.
- ⑥ (1) 2" CONDUIT (GENSET FEED PER ONE-LINE DIAGRAM),
 (1) 2" CONDUIT W/PULLSTRING (SPARE),
 (1) 1" CONDUIT ((4) #12 CU THWN-2, (1) #12 CU GRD FOR GENSET BATTERY CHARGER & BLOCK HEATER CIRCUITS),
 (1) 2" CONDUIT (GENSET SIGNAL & CONTROL CONDUCTORS AS REQUIRED BY GENSET & ATS MANUFACTURER AND FOR AUTODIALER REQUIREMENTS).
- ⑦ XFMR PAD, GROUNDING, TRENCH, BACKFILL & UG CONDUIT PER APS DRAWINGS & SPECS (SEE GENERAL NOTE 6).
- ⑧ 3/4" CONDUIT, (3) #6 CU THWN-2, (1) #10 CU GRD, TO PANEL AT MCC FOR ODOR CONTROL UNIT CONTROL PANEL/SHED LOAD CENTER.
- ⑨ 1" CONDUIT (POWER/CONTROL/SIGNAL INCL 4-20MA).
- ⑩ COORDINATE UNDER SLAB CONDUITS & STUB-UP LOCATIONS WITH FINAL EQUIPMENT MANUF. SHOP DRAWINGS.
- ⑪ 2" CONDUIT (CONTROL/SIGNAL PER ONE-LINE DIAGRAM & CIVIL PUMP CONTROL SPECS).
- ⑫ 3/4" CONDUIT, (6) #12 CU THWN-2, (1) #12 CU GRD (PUMP CONTROL/AUTODIALER POWER/MAG METER POWER).
- ⑬ CONTROL PANEL INCLUDING UNIT DISC, SWITCH, MOTOR STARTER, CONTROLS & OVERLOAD PROTECTION BY MANUFACTURER. BOND & GROUND EQUIPMENT INCLUDING MANUF. GROUND ROD AT CONTROL PANEL. INSTALL SHED LOAD CENTER AT SHED, 120/240V, 1PH, 3W, 50A MLO, 6x1" SPACES, 10KAC, SURFACE MOUNT, NEMA 1 ENCLOSURE. INSTALL (1) 2P/20A CIRCUIT BREAKER FOR THE ODOR CONTROL UNIT AND (3) 1P/20A CIRCUIT BREAKERS FOR A FUTURE WALL AC UNIT, LIGHTS, & A UTILITY RECEPTACLE.



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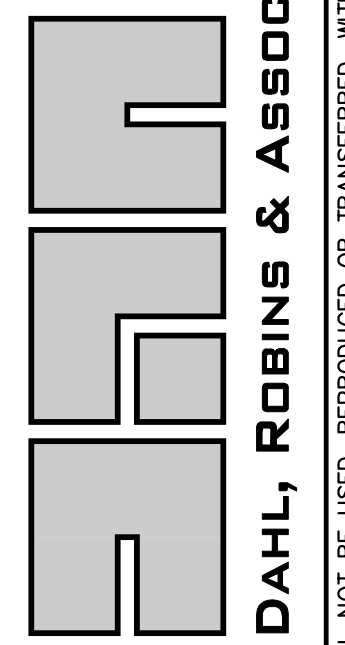
JOB No.: 14-040

Professional Engineer (Electrical)
CERTIFICATE NO. 11111
JAMES R. ADLER
Expires 05/31/18

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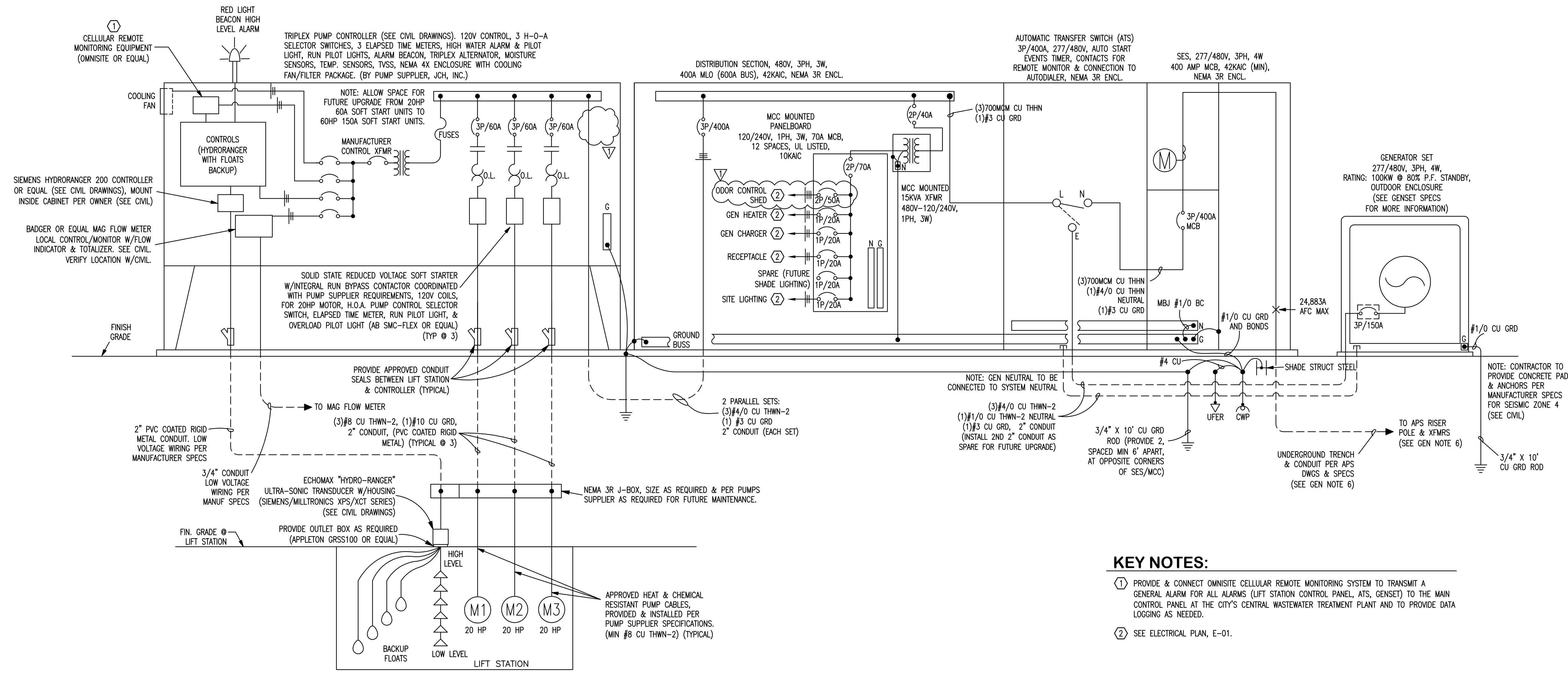


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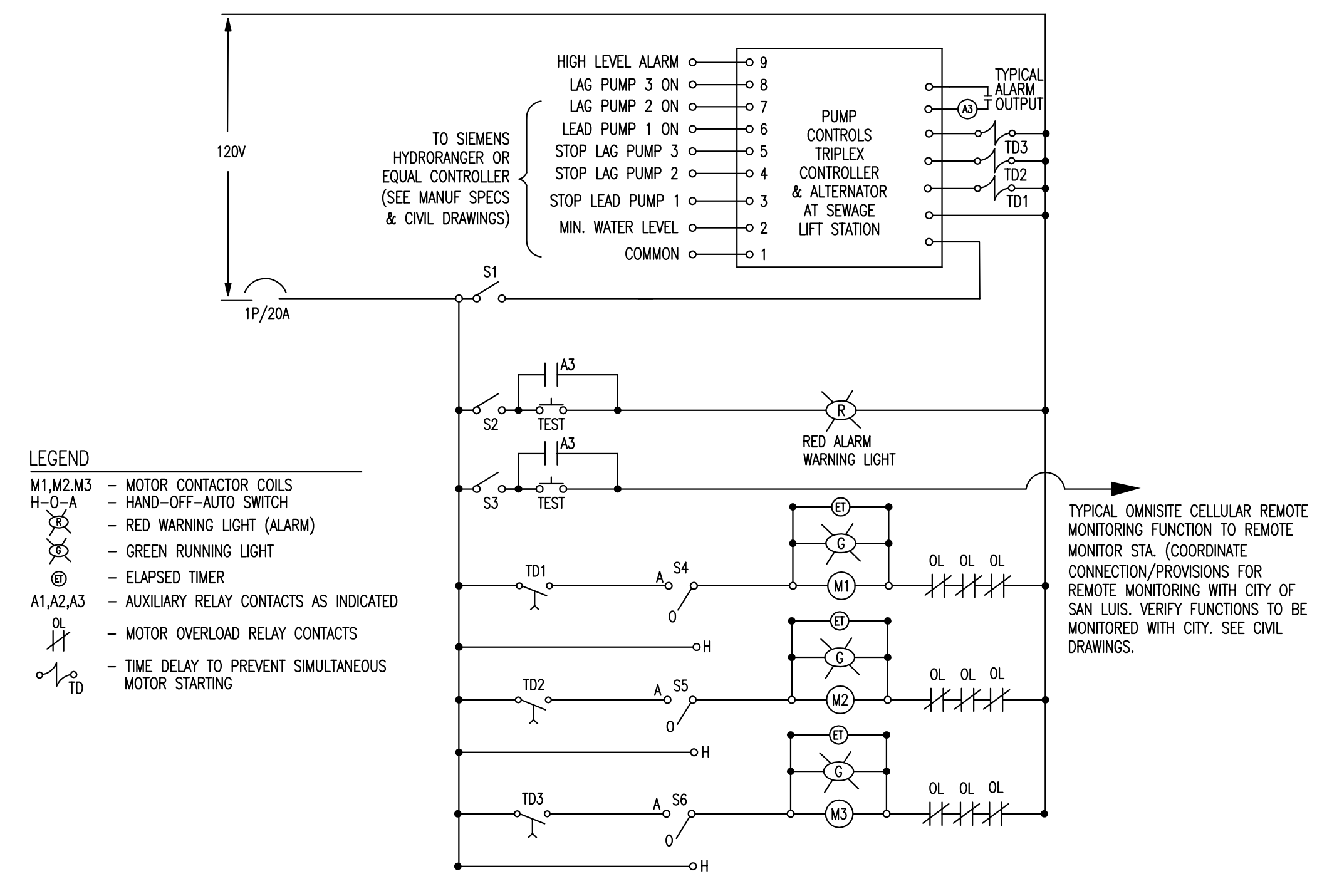
CITY OF SAN LUIS
JUAN SANCHEZ BLVD LIFT STATION
 LIFT STATION
 ELECTRICAL SITE PLAN

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DRAWINGS ISSUE RECORD:
 DATE: 08/30/16
 ADDED SHED, J.R.A.



1 E-02 LIFT STATION ELECTRICAL ONE-LINE DIAGRAM NTS



2 E-02 LIFT STATION TRIPLEX PUMP CONTROL DIAGRAM (BY JCH, INC.) NTS

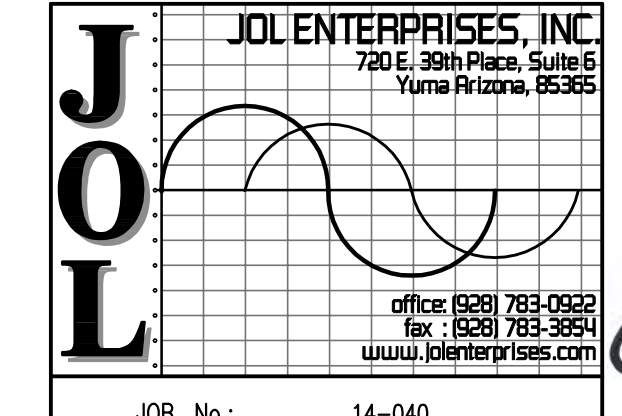
LOAD SUMMARY SES @ LIFT STATION		
LIFT STATION:		
NEW MCC PANELBOARD & TRANSFORMER		
LIGHTING (SITE)	465 VA	
LIGHTING (100SF SHED)	200 VA	
RECEPTACLES/SMALL TOOLS	1,500 VA	
GENERATOR BATTERY CHARGER & HEATER	1,860 VA	
ODOR CONTROL UNIT (1 HP BLOWER MAX.)	2,352 VA	
ODOR CONTROL SHED AC UNIT	1,800 VA	
SUBTOTAL	8,177 VA	9.8 AMPS @ 480V
NEW PUMP CONTROL PANEL		
SUBMERSIBLE PUMPS (3 x 20HP)	67,341 VA	
EQUIPMENT AC UNIT/COOLING FAN	10,200 VA	
PUMP CONTROLS	2,700 VA	
25% LARGEST MOTOR (20HP)	5,612 VA	
SUBTOTAL	85,853 VA	103.3 AMPS @ 480V
FUTURE LOAD		
ALLOWANCE FOR FUTURE UPGRADE (3 x 60HP EST.)	135,099 VA	
SUBTOTAL	135,099 VA	162.5 AMPS @ 480V
TOTAL LOAD	220,952 VA	265.8 AMPS @ 480V

KEY NOTES:

- ① PROVIDE & CONNECT ONMISITE CELLULAR REMOTE MONITORING SYSTEM TO TRANSMIT A GENERAL ALARM FOR ALL ALARMS (LIFT STATION CONTROL PANEL, ATS, GENSET) TO THE MAIN CONTROL PANEL AT THE CITY'S CENTRAL WASTEWATER TREATMENT PLANT AND TO PROVIDE DATA LOGGING AS NEEDED.
- ② SEE ELECTRICAL PLAN, E-01.

NOTES:

- 1. SES/MCC/ATS AND CONTROL PANEL SHALL BE DESIGNED & MANUFACTURED FOR OPERATION IN AN OUTDOOR ENVIRONMENT WITH A MAXIMUM AMBIENT OF 50°C. (122°F.). IN ADDITION, THE PROJECT SITE IS SUBJECT TO SIGNIFICANT & FREQUENT BLOWING & DRIFTING SAND. PROVIDE ADDITIONAL FILTERED VENTILATION AND AMBIENT COMPENSATED CB'S, OVERLOAD RELAYS, WIRING, CT'S, & ACCESSORIES AS REQUIRED BY MANUFACTURER.
- 2. SES/MCC/ATS SHALL BE DESIGNED & MANUFACTURED AS REQUIRED FOR WIND VELOCITIES UP TO 90 MPH & FOR SEISMIC ZONE 4, DESIGN CATEGORY D.
- 3. PROVIDE SERVICES OF MANUFACTURER'S TECHNICAL REPRESENTATIVE AS REQUIRED TO SET UP, CONNECT, TEST, DEMONSTRATE, & TRAIN FOR PROPER INSTALLATION & OPERATION OF PUMP CONTROLLER & MCC INTEGRATED INTELLIGENCE.
- 4. PUMP CONTROLLER WILL BE BY JCH, INC. (TRIPLEX/ALTERNATOR CONTROL FOR LIFT STATION).
- 5. SUBMIT SES, MCC, ATS, CONTROL PANEL, & ALL ACCESSORIES SHOP DRAWINGS & EQUIPMENT DATA SHEETS FOR APPROVAL.
- 6. PROVIDE RATED EQUIPMENT & DEVICES BY MANUFACTURER CAPABLE OF SAFELY INTERRUPTING THE AVAILABLE FAULT CURRENT.
- 7. PROVIDE WARNING LABELS & MARKING BY MANUFACTURER AT ALL SWITCHBOARDS, PANELBOARDS, & INDUSTRIAL CONTROL PANELS/MCC'S LIKELY TO CREATE ARC FLASH CONDITIONS AS REQUIRED BY NEC ART. 110.16.
- 8. LABEL & MARK MAIN SERVICE DISCONNECT(S) PER NEC. MAXIMUM OF 6 DISCONNECTS PERMITTED PER NEC.
- 9. TIE UFER GROUND TO BUILDING FOUNDATION PER NEC.

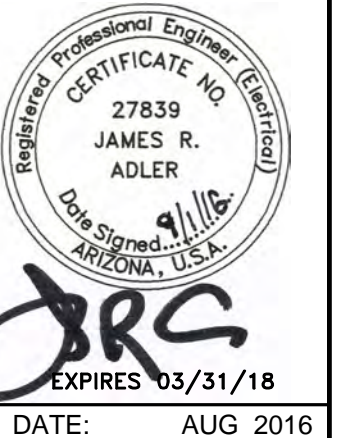


JOB. No.: 14-040
 DATE: AUG 2016
 SURVEYED BY: M.A.C.
 DRAWN BY: W.T.T.
 CHECKED BY: J.R.A.
 PROJECT NO.: 13033
 FILE NO.: 14040-E2
 SHEET OF
E-02

DRAWINGS ISSUE RECORD:
DATE: 08/30/16
ADDN SHEET, J.R.A.

DAHL, ROBINS & ASSOCIATES, INC.
 1560 S. 5th Avenue
 Yuma, AZ 85364
 Phone: (928) 819-0825
 Fax: (928) 819-0826
 www.drahobins.com

CITY OF SAN LUIS
JUAN SANCHEZ BLVD LIFT STATION
 LIFT STATION
 ELECTRICAL ONE-LINE DIAGRAM



JOB. No.: 14-040
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GENERATOR SPECIFICATIONS:

- 1.10 GENERATOR SET
 - A. Generator: NEMA MG1, three phase, four pole reconnectible brushless synchronous generator with brushless exciter.
 - B. Rating: 100KW, .8 power factor (stand by), 277/480 volts, 60 Hz at 1800 rpm.
 - C. Insulation Class: H.
 - D. Temperature Rise: 150 degrees C Standby.
 - E. Enclosure: NEMA MG1, open drip proof.
 - F. Voltage Regulation: Include generator-mounted volts per hertz exciter-regulator to match engine and generator characteristics, with voltage regulation plus or minus 1 percent from no load to full load. Include manual controls to adjust voltage drop, voltage level (plus or minus 5 percent) and voltage gain.
 - G. Fuel: No. 2 Diesel Fuel.
 - H. Ambient Temperature Rating: 120' F.
 - I. Elevation: 500' above sea level.
 - J. Cooling: Liquid cooled.
 - K. Total Harmonic Distortion: <3%.
 - L. Emissions/Certification: EPA Tier 3 and as required by state & local laws and ordinances.
 - M. Manufacturers: GENERAC SD100, Caterpillar C4.4 100KW, Kohler 100RE0ZJF, Cummins D53AA, or equal.
- 1.11 ACCESSORIES
 - A. Skid-Mounted Fuel Tank: Steel tank, with fill and vent, sufficient capacity for 24 hours operation.
 - B. Batteries: Heavy duty, diesel starting type lead-acid storage batteries, 170 ampere-hours minimum capacity. Match battery voltage to starting system. Include necessary cables and clamps.
 - C. Battery Tray: Treated for electrolyte resistance, constructed to contain spillage.
 - D. Battery Charger: Current limiting type designed to float at 2.17 volts per cell and equalize at 2.33 volts per cell. Include overload protection, full wave rectifier, DC voltmeter and ammeter, and 120 volts AC fused input. Provide wall-mounted enclosure to meet NEMA 250, Type 1 requirements.
 - E. Line Circuit Breaker: NEMA AB 1, molded case circuit breaker on generator output with integral thermal and instantaneous magnetic trip in each pole, sized in accordance with NFPA 70. Include battery-voltage operated shunt trip, connected to open circuit breaker on engine failure. Unit mount in enclosure to meet NEMA 250, Type 1 requirements.
 - F. Engine-Generator Control Panel: NEMA 250, Type 1 generator mounted control panel enclosure with engine and generator controls and indicators. Include provision for padlock and the following equipment and features: Frequency Meter: 4.5-65Hz range, 3.5 inch dial. AC Output Voltmeter: 3.5 inch dial, 2 percent accuracy, with phase selector switch. AC Output Ammeter: 3.5 inch dial, 2 percent accuracy, with phase selector switch. Output voltage adjustment. Push-to-test indicator lamps, one each for low oil pressure, high water temperature, overspeed, and overcrank. Engine auto/start/stop selector switch. Engine running time meter. Oil pressure gauge. Water temperature gauge. Auxiliary Relay: SPDT, operates when engine runs, with contact terminals prewired to terminal strip. Additional visual indicators and alarms as required by NFPA 110. Remote Alarm Contacts: Pre-wire SPDT contacts to terminal strip for remote alarm functions required by NFPA 110.
 - G. Remote Annunciation: Provide wiring to autodialer for remote annunciation as required by NFPA 110.
 - H. Enclosure: Weather protective NEMA 3R locking type enclosure.
 - I. Engine Jacket Heater required to maintain engine jacket water at manufacturer requirements.
- 1.12 AUTOMATIC TRANSFER SWITCH
 - A. Equipment shall be furnished by the generator supplier as part of the generator package.
 - B. Product Description: NEMA ICS 10, automatic transfer switch.
 - C. Configuration: Electrically operated, mechanically held transfer switch.
 - D. Interrupting Capacity: 100 percent of continuous rating.
 - E. Withstand Current Rating: As indicated.
 - F. Control Features and Functions:
 - 1. Indicating Lights: Mount in inside cover of enclosure to indicate NORMAL SOURCE AVAILABLE, ALTERNATE SOURCE AVAILABLE, switch position.
 - 2. Test Switch: Mount in inside cover of enclosure to simulate failure of normal source.
 - 3. Return to Normal Switch: Mount in inside cover of enclosure to initiate manual transfer from alternate source to normal source.
 - 4. Transfer Switch Auxiliary Contacts: 1 normally open; 1 normally closed.
 - 5. Normal Source Monitor: Monitor normal source voltage and frequency; initiate transfer when voltage drops below 85 percent or frequency varies more than 3 percent from rated nominal value.
 - 6. Alternate Source Monitor: Monitor alternate source voltage and frequency; inhibit transfer when voltage is below 85 percent or frequency varies more than 3 percent from rated nominal value.
 - 7. In-Phase Monitor: Inhibit transfer until source and load are within phase.
 - G. Automatic Sequence of Operation:
 - 1. Initiate Time Delay to Start Alternate Source Engine Generator: Upon initiation by normal source monitor. Adjustable.
 - 2. Initiate Transfer Load to Alternate Source: Upon initiation by normal source monitor and permission by alternate source monitor. Time Delay Before Transfer to Alternate Power Source: Adjustable.
 - 3. Initiate Retransfer Load to Normal Source: Upon permission by normal source monitor. Time Delay Before Transfer to Normal Power: Adjustable; bypass time delay in event of alternate source failure.
 - H. Time Delay Before Engine Shut Down: Adjustable, of unloaded operation.
 - I. Engine Exerciser: Start engine every 7 to 30 days; run for 30 minutes before shutting down. Bypass exerciser control when normal source fails during exercising period.
 - J. Alternate System Exerciser: Transfer load to alternate source during engine exercising period.
 - K. Enclosure: ICS 10, Type 3R, manufacturer's standard gray enamel finish (open, mounted in MCC).
- 1.13 SUBMITTALS
 - A. Submit manufacturer generator sizing analysis coordinated to actual proposed loads.
 - B. Submit equipment shop drawings, equipment, data, installation & O&M manuals, and test reports for approval.
 - C. Furnish maintenance materials including one set of tools for preventive maintenance recommended by manufacturer, and two of each fuel, oil, and air filter element.
- 1.14 INSTALLATION
 - A. Install in accordance with manufacturer's instructions.
- 1.15 FIELD QUALITY CONTROL
 - A. Field inspection and testing.
 - B. Provide full load test utilizing portable test bank, if required, for four hours minimum. Simulate power failure including operation of transfer switch, automatic starting cycle, and automatic shutdown and return to normal.
 - C. Record in 20 minute intervals during four hour test: Kilowatts; Amperes; Voltage; Coolant temperature; Ambient temperature; Frequency; Oil pressure.
 - D. Test alarm and shutdown circuits by simulating conditions.
- 1.16 ADJUSTING AND CLEANING
 - A. Adjust generator output voltage and engine speed.
 - B. Clean engine and generator surfaces. Replace oil and fuel filters.
- 1.17 MANUFACTURER'S FIELD SERVICES
 - A. Prepare and start systems. Include services of technician to supervise installation, adjustments, final connections, system testing, and Owner training.
- 1.18 DEMONSTRATION
 - A. Provide systems demonstration. Describe loads connected to standby system and restrictions for future load additions. Simulate power outage by interrupting normal source, and demonstrate that system operates to provide standby power.
 - B. Owner Training: Provide at least one review session for owner orientation. Training to include all aspects of operation and routine maintenance of the system.
- 1.19 WARRANTIES
 - A. Provide manufacturer standard warranty, minimum 2 years parts & labor.

ELECTRICAL SPECIFICATIONS:

FURNISH AND INSTALL, INCLUDING LABOR, SUPERVISION, MATERIALS, TOOLS, SERVICES, TRANSPORTATION, OVERHEAD COSTS, FEES, PLAN CHECK FEES, INSPECTION CHARGES, ROYALTIES, PROFITS, ETC., A COMPLETE ELECTRICAL INSTALLATION AS SPECIFIED HEREIN AND INDICATED ON THE ELECTRICAL DRAWINGS. PERFORM WORK IN AN APPROVED, NEAT, FIRST CLASS, SAFE, WORKMANSHIP LIKE MANNER THAT COMPLIES WITH ALL APPLICABLE LOCAL, STATE, FEDERAL, AND SERVING ELECTRICAL AND TELEPHONE UTILITIES, ETC., CODES, ORDINANCES, RULES, REGULATIONS, STANDARDS, ETC. THE ENTIRE ELECTRICAL INSTALLATION SHALL COMPLY WITH OR SURPASS THE MOST RECENT EDITION OF THE NATIONAL ELECTRICAL CODE AND OCCUPATIONAL SAFETY AND HEALTH ACT (OSHA).

ALL MATERIALS AND EQUIPMENT FURNISHED BY THE ELECTRICAL CONTRACTOR SHALL BE NEW OF FIRST-CLASS QUALITY UNLESS NOTED OTHERWISE, FREE FROM DEFECTS, AND CONFORM WITH UNDERWRITER LABORATORIES INC. STANDARDS AND BE SO LABELED. MATERIALS, EQUIPMENT ETC. NOT INDICATED ON DRAWINGS OR SPECIFIED HEREIN BUT REQUIRED FOR A SUCCESSFUL AND EFFICIENT COMPLETION OF THE ELECTRICAL INSTALLATION SHALL BE HELD TO BE IMPLIED AND SHALL BE FURNISHED AND INSTALLED AT NO ADDITIONAL COST. ENCLOSURES FOR ALL EQUIPMENT SHALL BE SUITABLE FOR USE INTENDED e.g., WEATHER-PROOF FOR EXTERIOR AND WET LOCATIONS. ALL EQUIPMENT SHALL BE RATED FOR USE INTENDED, e.g., VOLTAGE, HORSE POWER, RATING OF DISCONNECT SWITCHES, ETC.

IMMEDIATELY UPON AWARD OF CONTRACT, COORDINATE BETWEEN UTILITIES AND OWNER TO QUANTIFY AND FINALIZE TOTAL UTILITY COMPANY CHARGES AND OWNER PAYMENT OF SERVICE CHARGES FOR SERVING ELECTRICAL AND TELEPHONE UTILITIES. INCLUDE IN BID AND PROVIDE ALL ADDITIONAL WORK, MATERIALS, ETC., REQUIRED BY THE UTILITIES SUCH AS TRENCHING, BACKFILL, CONDUIT, TRANSFORMER PADS, GROUNDING, ETC. REQUIRED TO PROVIDE COMPLETE ELECTRICAL AND TELEPHONE SERVICE TO THIS PROJECT.

MATERIALS, EQUIPMENT, ETC., INCLUDING THOSE FURNISHED BY OTHERS, THAT ARE TO BE INSTALLED BY THE ELECTRICAL CONTRACTOR SHALL BE RECEIVED AND PROPERLY PROTECTED BY THE CONTRACTOR UNTIL ENTIRE INSTALLATION IS COMPLETE.

MAKE NO INSTALLATION OF WORK WHICH WOULD LEAVE INADEQUATE OPERATION OR SERVICING SPACE FOR ANY ITEM FOR THE ENTIRE PROJECT. DRAWINGS ARE NOT INTENDED TO SHOW IN DETAIL ALL FEATURES OF WORK. CHECK LOCATION AT ELECTRICAL WORK TO DETERMINE IN ADVANCE THAT IT CLEARS ALL OPENINGS, STRUCTURAL MEMBERS, ETC. THE CONTRACTOR SHALL INSTALL ALL THE MINIMUM CODE REQUIRED MATERIALS AND EQUIPMENT AT NO ADDITIONAL COST.

ALL SWITCHES AND RECEPTACLES FOR THIS PROJECT SHALL BE COMMERCIAL GRADE 20 AMP. PROVIDE WEATHER-PROOF DIE CAST ALUMINUM BOXES & COVERS AT OUTDOOR LOCATIONS. INSTALL "IN-USE" TYPE WP COVERS AT RECEPTACLES AT OUTDOOR WET LOCATIONS.

ALL WIRING SHALL BE INSTALLED IN APPROVED RACEWAYS IF REQUIRED BY CODES. RACEWAYS SHALL BE APPROVED FOR USE INTENDED. ALL ELECTRICAL CONDUCTORS SHOWN ARE 600V COPPER, MINIMUM SIZE CONDUCTOR IS NO. 12 AWG, AND AS RECOMMENDED BY SUPPLIER OF EQUIPMENT AS APPLICABLE.

ALL CONDUIT SHALL BE INSTALLED CONCEALED UNLESS NOTED OTHERWISE. ALL CEILING, FLOOR, AND WALL PENETRATIONS SHALL BE CAULKED/SEALED TO PRESERVE FIRE RATINGS AND WATER PROOF INTEGRITY. FIRESTOPPING OF PENETRATIONS THROUGH FIRE RATED FLOORS, CEILING & WALLS SHALL BE IN ACCORDANCE WITH IBC & UL AND AS REQUIRED BY THE FIRESTOPPING MANUFACTURER FOR THE CONSTRUCTION TYPE & FIRE RATING SPECIFIED. THE FIRESTOPPING SYSTEM SHALL BE LISTED AND TESTED TO UL-1479 & ASTM E-814. INSTALL IN STRICT COMPLIANCE WITH THE MANUFACTURER INSTRUCTIONS.

FURNISH AND INSTALL FIXTURES COMPLETE WITH LAMPS AND ACCESSORIES. INSTALL SYMMETRICAL AND PLUMB. CLEAN LENSES AND/OR REFLECTORS AT COMPLETION.

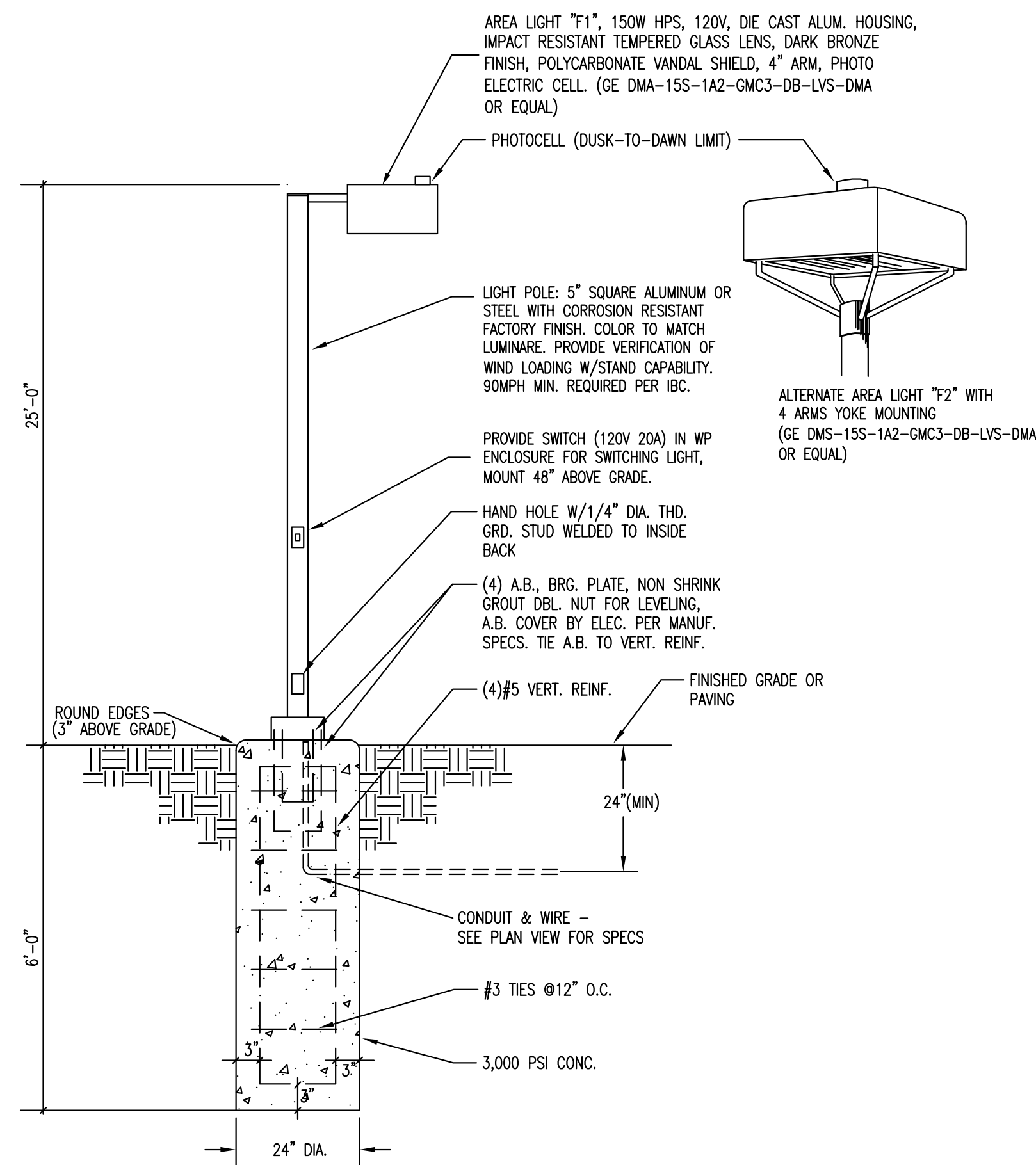
PROVIDE SWITCHBOARDS, SERVICE EQUIPMENT, & PANELBOARDS WITH FULL SIZED BREAKERS AND COPPER BUSSING. LABEL EQUIPMENT AND WIRING PER NEC. PROVIDE TYPED PANEL DIRECTORIES AND IDENTIFY ALL CIRCUITS AND SPACES.

LABEL EQUIPMENT WITH MYCARTA TAGS, 1/4" ENGRAVED LETTERS. PROVIDE WIRE COLOR CODING PER NEC AND ACCEPTED STANDARDS. PROVIDE UNDERGROUND WARNING TAPE AT ALL UNDERGROUND CONDUIT SYSTEMS.

THIS CONTRACT IS TO INCLUDE ALL CONTINGENCIES WHICH MAY ARISE AND WHICH MAY BE REQUIRED TO MAKE A COMPLETE ELECTRICAL SYSTEM.

THE ELECTRICAL CONTRACTOR SHALL VISIT SITE AND DETERMINE EXTENT OF THE WORK. AT COMPLETION OF ELECTRICAL INSTALLATION, PROVIDE OWNER WITH ACCURATE AS-BUILT DRAWINGS INDICATING ALL VARIATIONS FROM CONTRACT DRAWINGS, AND A LETTER TO THE OWNER'S REPRESENTATIVE STATING PROJECT FULLY COMPLIES WITH ALL CONTRACT DOCUMENTS AND IF NOT, HOW INSTALLATION WAS ACCOMPLISHED. ALL CHANGES SHALL BE SUBJECT TO OWNER'S REPRESENTATIVE'S APPROVAL.

PROVIDE NECESSARY LABOR, TOOLS, EQUIPMENT, e.g., VOLTMETER, AMMETER, MEGGER, ETC., AND CHECK ENTIRE ELECTRICAL SYSTEM IN THE PRESENCE OF THE OWNER'S REPRESENTATIVE. ALL TESTING SHALL BE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATION OF EQUIPMENT, MATERIALS, ETC., BEING TESTED.



1
E-03 NTS
AREA LIGHT & POLE DETAIL

ELECTRICAL SYMBOLS & ABBREVIATIONS:

- ⊗ DUPLEX RECEPTACLE, 120V/20A, MOUNT 15" A.F.F. UNLESS NOTED OTHERWISE.
- GF1 GROUND FAULT CIRCUIT INTERRUPTER.
- WP OUTDOOR WEATHERPROOF ENCLOSURE.
- WP-U OUTDOOR WEATHERPROOF "IN-USE" ENCLOSURE.
- ⊙ JUNCTION BOX, MOUNT AS SHOWN.
- CWP COLD WATER PIPE.
- ||||| NUMBER OF WIRES IN CONDUIT, LONG SLASH DENOTES GROUND WIRE, SHORT SLASH DENOTES NUMBER OF CURRENT CARRYING CONDUCTORS, HALF SLASH DENOTES SWITCHED LEG.
- Ⓕ LIGHT CIRCUIT SWITCH, 120V/20A, MOUNT 48" A.F.F. UNLESS NOTED OTHERWISE.
- SES SERVICE ENTRANCE SECTION, SIZED AS SHOWN.
- FUSED OR NONFUSED DISCONNECT SAFETY SWITCH, SIZE & TYPE AS SHOWN.
- ☒ NEMA MOTOR STARTER, SIZE AS SHOWN.
- ☉ PHOTO CELL, 120V/20A, MOUNT ON ROOF, NEMA 3R.
- UNDERGROUND CONDUIT.
- ABOVE GROUND CONDUIT.

JOLENTERPRISES, INC.
720 E. 38th Place, Suite E1
Yuma, Arizona, 85365
office: (928) 783-0920
fax: (928) 783-3954
www.jolenterprises.com

JOB. No.: 14-040

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DAHL, ROBINS & ASSOCIATES, INC.

1560 S. 5th Avenue
Yuma, AZ 85364
Phone: (928) 819-0825
Fax: (928) 819-0826
www.dahlrobins.com

CITY OF SAN LUIS
JUAN SANCHEZ BLVD LIFT STATION
LIFT STATION
ELECTRICAL SPECIFICATIONS & DETAILS

Professional Engineer Seal
27839
JAMES R. ADLER
Date: 03/31/16

EXPIRES 03/31/18

DATE: AUG 2016
SURVEYED BY: M.A.C.
DRAWN BY: W.T.T.
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