

# LAKE HAVASU CITY PALO VERDE BLVD. S., INDUSTRIAL BLVD., & KIOWA AVE. PAVEMENT REHABILITATION

PROJECT B24-PW-500396-108018

JULY 2023

BID SET

## DRAWING INDEX

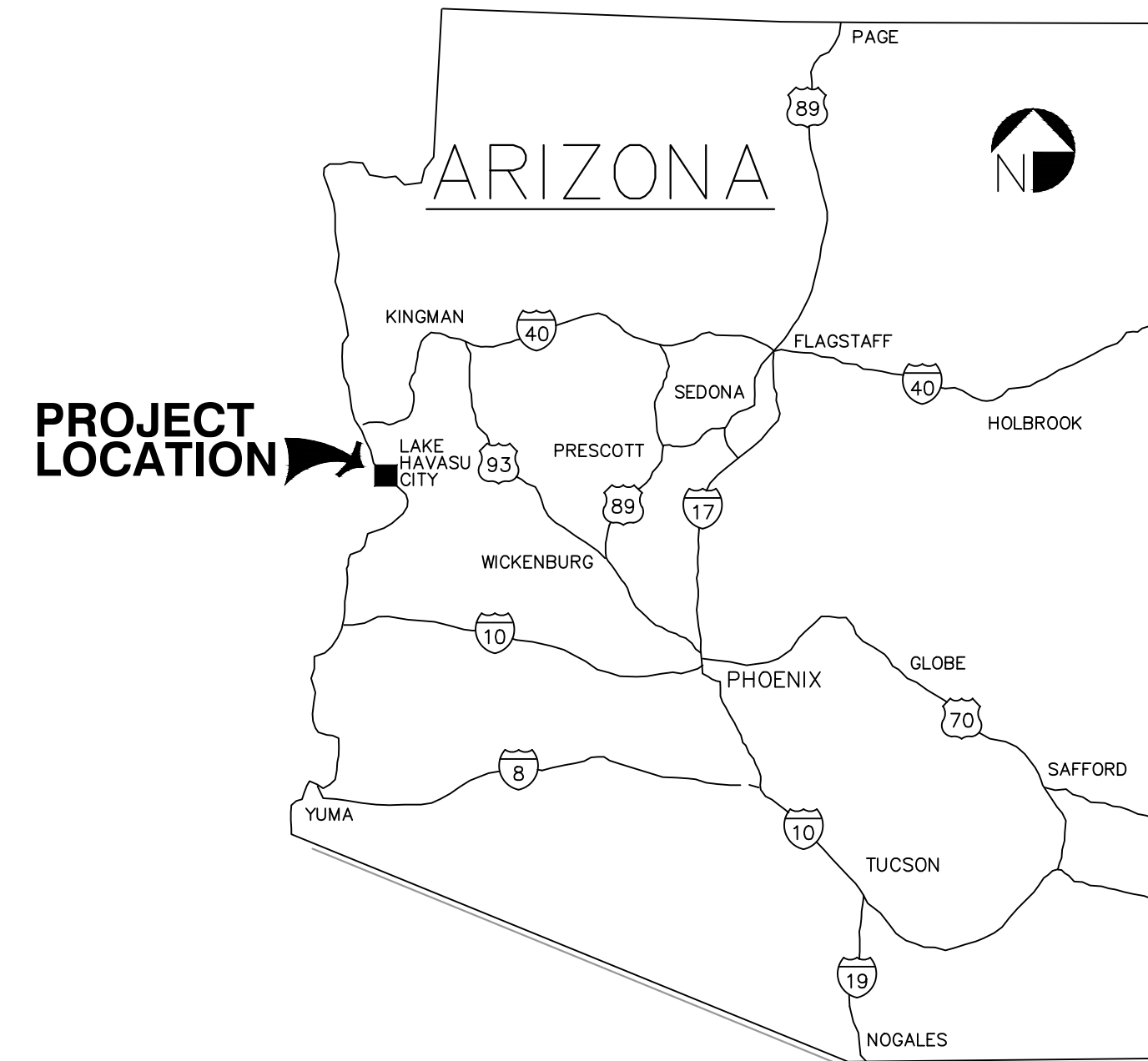
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C-16	GENERAL DETAILS III



## CITY COUNCIL

MAYOR: CAL SHEEHY  
VICE MAYOR: DAVID LANE  
CITY COUNCIL: NANCY CAMPBELL  
JIM DOLAN  
MICHELE LIN  
CAMERON MOSES  
JENI COKE

CITY MANAGER: JESS KNUDSON  
CITY ENGINEER: GREG FROSLIE, PE  
PROJECT MANAGER: JASON HART



VICINITY MAP  
SCALE: N.T.S.



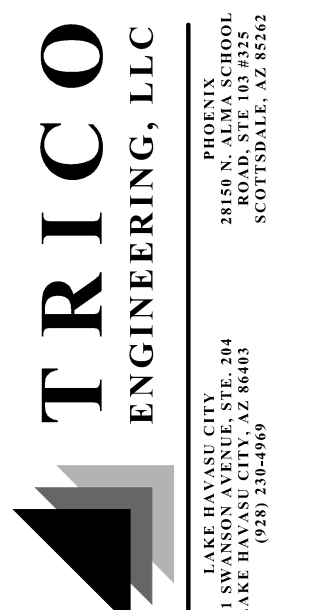
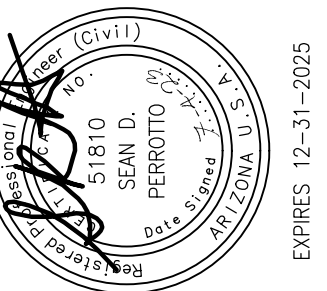
LOCATION MAP  
SCALE: N.T.S.

## UTILITY CONTACTS:

CITY OF LAKE HAVASU CITY (WASTEWATER) (928) 855-3999  
CITY OF LAKE HAVASU CITY (WATER) (928) 855-2618  
SUDDENLINK (CABLE) (928) 855-7815  
UNISOURCE ENERGY SERVICES (GAS) (928) 505-7025  
UNISOURCE ENERGY SERVICES (ELECTRIC) (928) 505-7031



NO.	DATE	REVISION RECORD DESCRIPTION



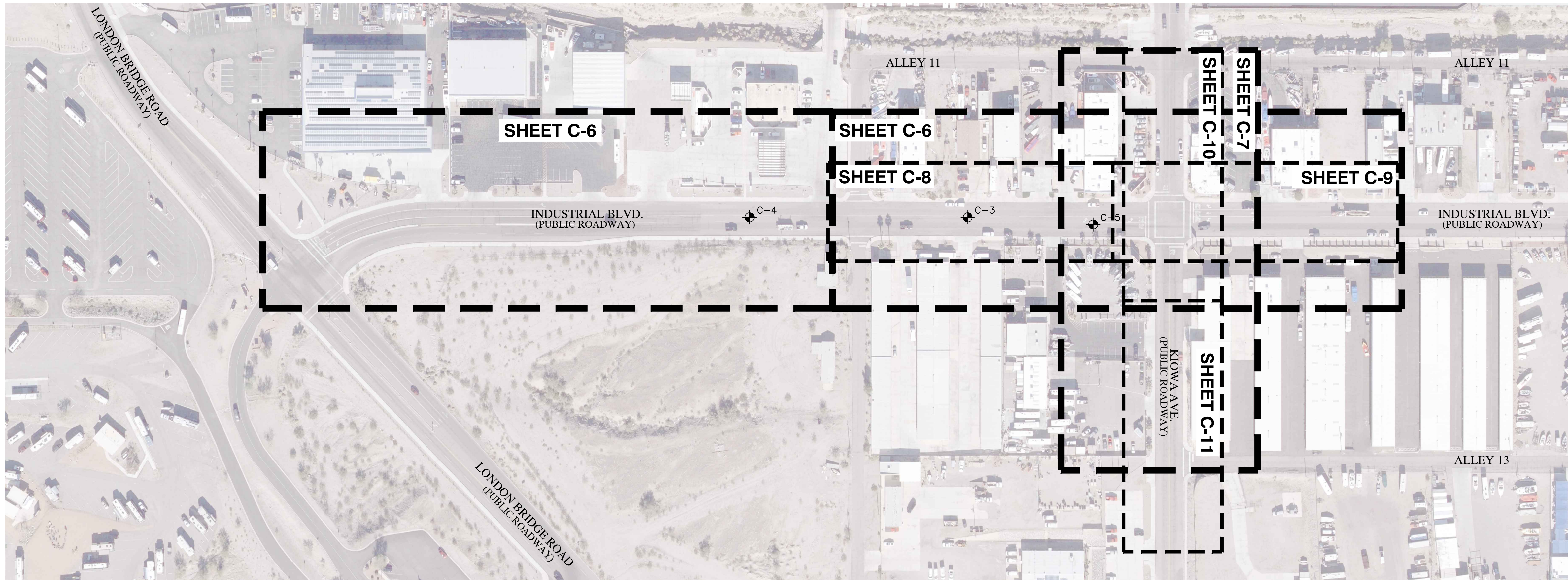
PALO VERDE BLVD. S.,  
INDUSTRIAL BLVD., & KIOWA AVE.  
PAVEMENT REHABILITATION  
PROJECT B24-PW-500396-108018  
LAKE HAVASU CITY  
2330 MCCULLOCH BLVD N.  
LAKE HAVASU CITY, AZ 86403  
(928) 855-2116



COVER SHEET	DATE:	JULY 2023	DRAWN BY:	CCP
	DWG SCALE:	N.T.S.	CHECKED BY:	EPJ/SBP
	PROJECT NO.:		APPROVED BY:	22-086
	SHEET:	1	OF:	16

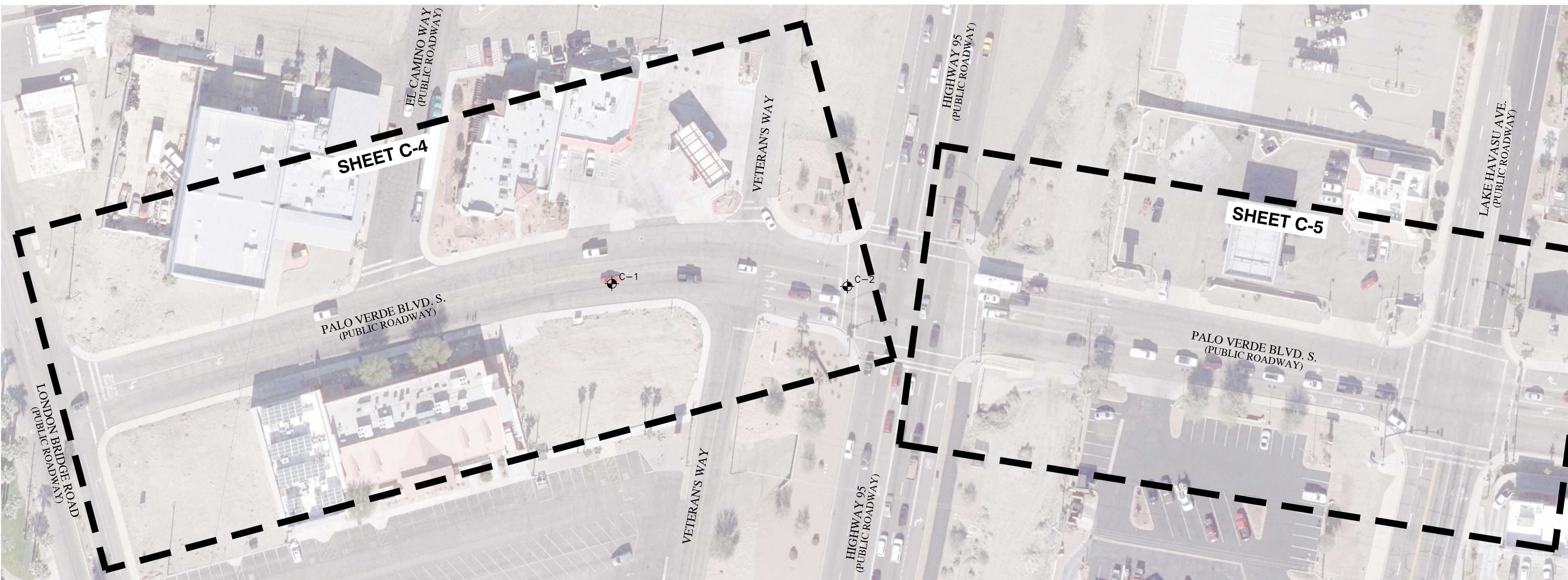
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**C-1**





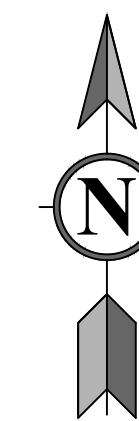
**INDUSTRIAL BLVD.**

SCALE 1"=100'



**PALO VERDE BLVD. S.**

SCALE 1"=50'

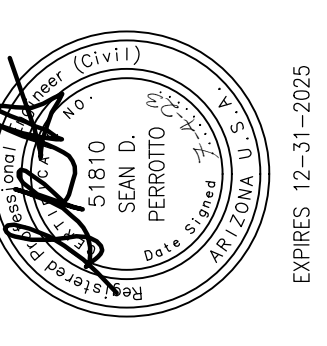


TEST HOLE SUMMARY REPORT

TEST HOLE #	SURFACE CUT	ASPHALT THICKNESS
TP-1	CORE	3.0-INCH
TP-2	CORE	3.0-INCH
TP-3	CORE	3.0-INCH
TP-4	CORE	3.0-INCH
TP-5	CORE	3.0-INCH

REVISION RECORD

NO	DATE	DESCRIPTION



**TRICO ENGINEERING, LLC**  
 PRESENTS  
 SEAN D. PERROTTO  
 REGISTERED PROFESSIONAL ENGINEER  
 LICENSE NO. 15180  
 STATE OF ARIZONA  
 EXPIRES 12-31-2025

**PALO VERDE BLVD. S., INDUSTRIAL BLVD., & KIOWA AVE. PAVEMENT REHABILITATION PROJECT B24-PW-500396-108018**  
 LAKE HAVASU CITY  
 2330 MCCULLOCH BLVD. N.  
 LAKE HAVASU CITY, AZ 86403  
 (928) 852-2116



**SITE INDEX MAP**

DATE:	JULY 2023	DRAWN BY:	CCP
DWG SCALE:	VARIABLES	CHECKED BY:	EP/SPD
PROJECT NO.:	B24-PW-500396-108018	APPROVED BY:	22-086
SHEET 3 OF 16		SHEET 3 OF 16	



C:\Trico\_Engineering\_LLC\Projects\2023\12-086\_AIC\_Palo\_Verde\_South\_Pavement\_Rehab\Drawings\22-086\_Site\_Index\_Map.dwg (5/22/2023 - changes) - LP: 7/4/2023 11:28 AM

**DEMOLITION KEY NOTES:**

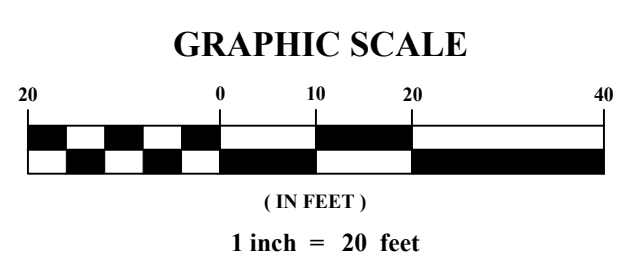
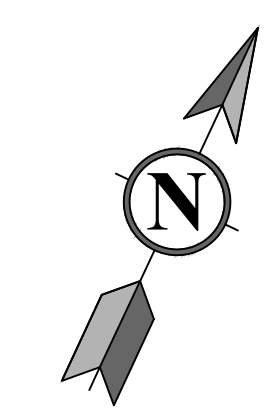
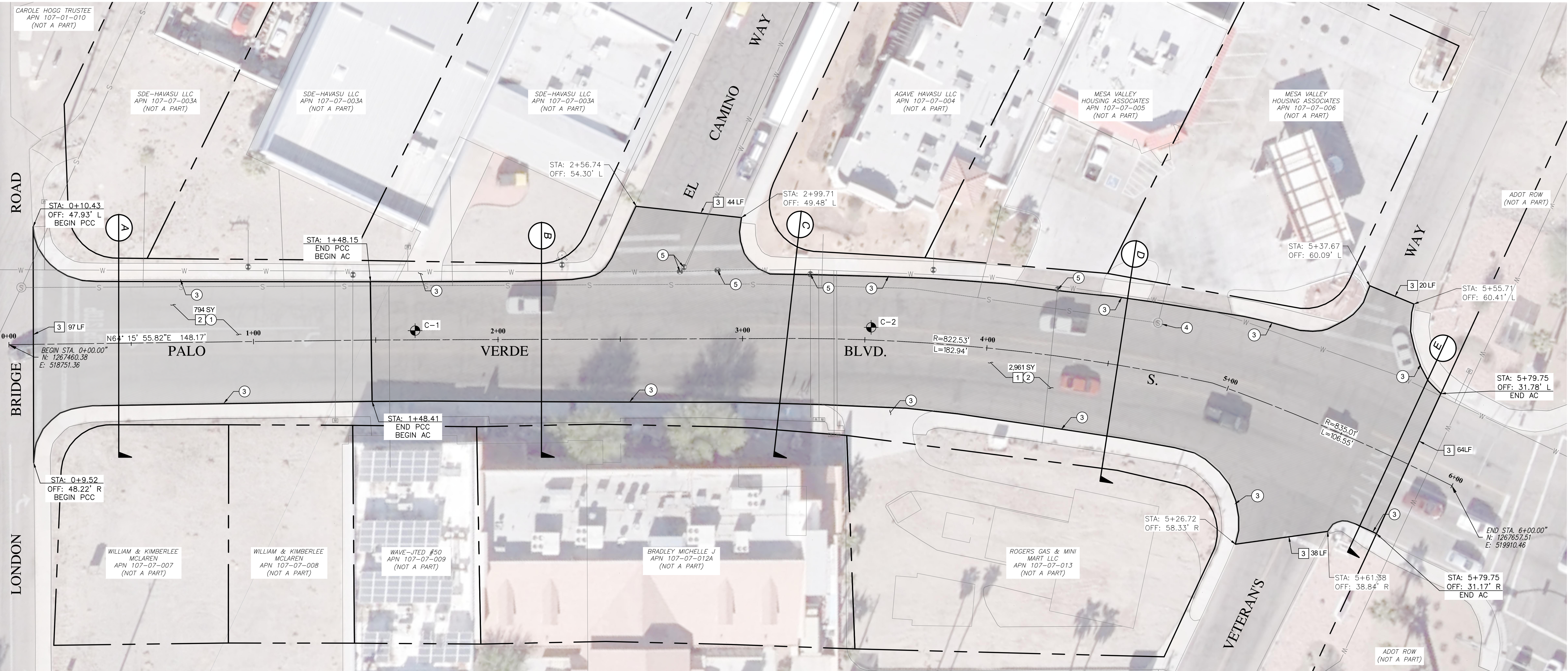
- 1 ROTO-MILL 2" EXISTING AC PAVEMENT.
- 2 ROTO-MILL 3" FULL DEPTH EXISTING AC PAVEMENT, AND REMOVE ADDITIONAL 3" INCHES AGGREGATE BASE.
- 3 SAWCUT EXISTING PAVEMENT AND/OR CONCRETE FULL DEPTH.

**CONSTRUCTION NOTES:**

- 1 PLACE 6" PCC / 0" AB PER STRUCTURAL DETAIL 2 ON SHEET C-12 AND THICKENED EDGE TRNITION PER DETAIL ON SHEET C-14.
- 2 PLACE 2" AC PER STRUCTURAL DETAIL 1 ON SHEET C-12.
- 3 EXISTING FEATURE TO BE PROTECTED IN PLACE.
- 4 ADJUST MANHOLE FRAME AND COVER PER MAG DETAIL 422.
- 5 ADJUST WATER VALVE CONCRETE COLLAR PER MAG DETAIL 391-2.
- 6 EX UTILITY TO BE ABANDONED PER WATER SHEET.

**GENERAL NOTES:**

- 1 CONTRACTOR SHALL MATCH EXISTING ELEVATIONS WHERE CONNECTING NEW AC PAVEMENT TO EXISTING AC PAVEMENT, CURB, OR DRIVEWAY.
- 2 ACCESS TO BUSINESSES SHALL MAINTAIN OPEN AT ALL TIMES.
- 3 ADOT ROW LIMITS SHOWN HEREIN ARE APPROXIMATE AND SHALL BE CONFIRMED BY CONTRACTOR IN FIELD.
- 4 LIMITS OF CONSTRUCTION SHOWN ARE INTENDED TO BE OUTSIDE OF ADOT ROW AND SHALL NOT ENCR OACH INTO ADOT ROW. IN THE EVENT IMPROVEMENTS SHOWN HEREIN DO ENCR OACH, CONTRACTOR SHALL COORDINATE WITH CITY TO MAKE THE NECESSARY FIELD ADJUSTMENTS TO STAY OUTSIDE OF ADOT ROW.



Contact Arizona 811 at least two full working days before you begin excavation.

**ARIZONA811**  
Call 811 or click Arizona811.com

NO	DATE	DESCRIPTION



**TRICO**  
ENGINEERING, LLC  
PREPARED BY: SEAN D. PERROTTO  
PROJECT NO.: 2024-004  
DATE: 07/15/2024  
ADDRESS: 2330 MCCULLOCH BLVD. N., LAKE HAVASU CITY, AZ 86403  
PHONE: (928) 852-2116

**PALO VERDE BLVD. S., INDUSTRIAL BLVD., & KIOWA AVE. PAVEMENT REHABILITATION PROJECT B24-PW-500396-108018**  
LAKE HAVASU CITY  
2330 MCCULLOCH BLVD. N.  
LAKE HAVASU CITY, AZ 86403  
(928) 852-2116



DATE	DRAWN BY	CHECKED BY	APPROVED BY
JULY 2024	1"=20'		

**DRAWING NO. C-4**  
SHEET 4 OF 16

C:\Trico\_Engineering\_LLC\Projects\2024\B24-PW-500396-108018\_P24-004\_Street\_Pavement\_Revamp\Plan\24-004\_P24-004\_Street\_Pavement\_Revamp.dwg - LP: 7/16/2024 12:14 PM

**DEMOLITION KEY NOTES:**

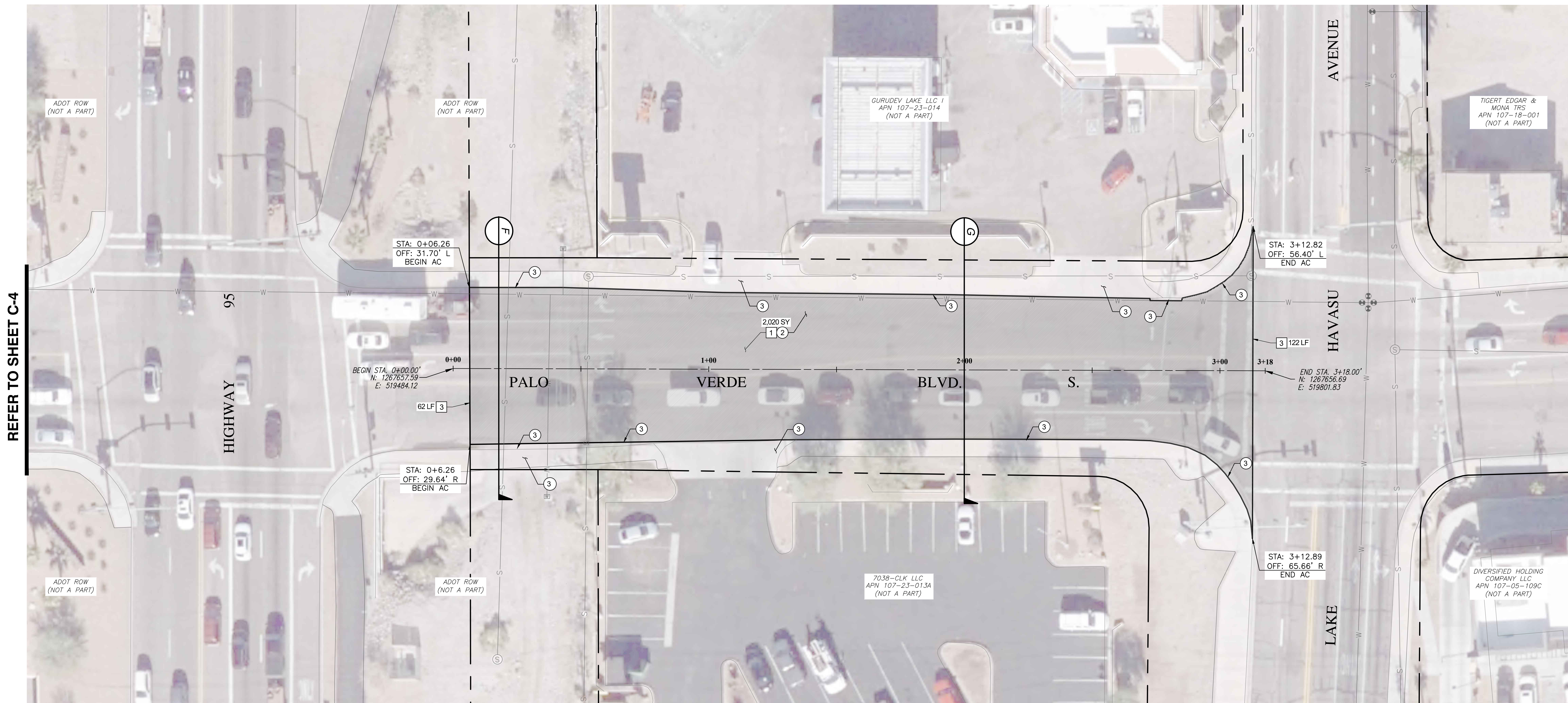
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**GENERAL NOTES:**

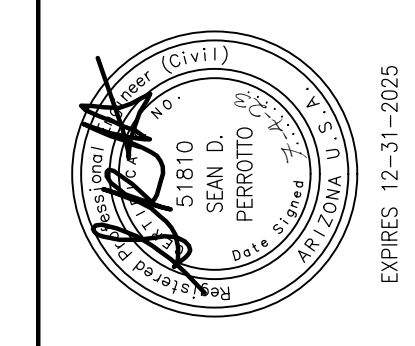
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REFER TO SHEET C-4

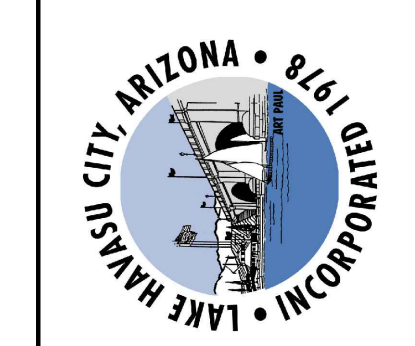
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NO	DATE	REVISION RECORD	DESCRIPTION



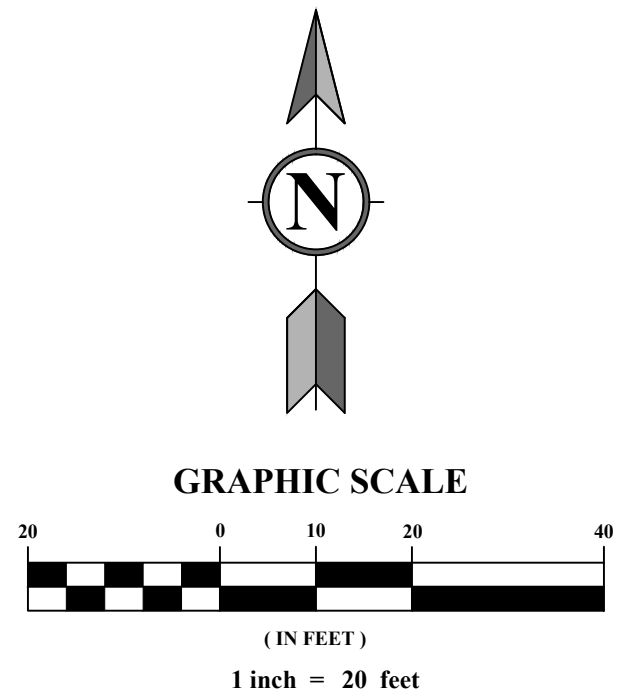
**TRICO ENGINEERING, LLC**  
 PRESENTS  
 SEAN D. PERROTTO  
 LICENSED PROFESSIONAL ENGINEER  
 LICENSE NO. 12001  
 SCOTTSDALE, AZ 85258

**PALO VERDE BLVD. S., INDUSTRIAL BLVD., & KIOWA AVE. PAVEMENT REHABILITATION PROJECT B24-PW-500396-108018**  
 LAKE HAVASU CITY  
 2330 MCCULLOCH BLVD. N.  
 LAKE HAVASU CITY, AZ 86403  
 (928) 852-2116



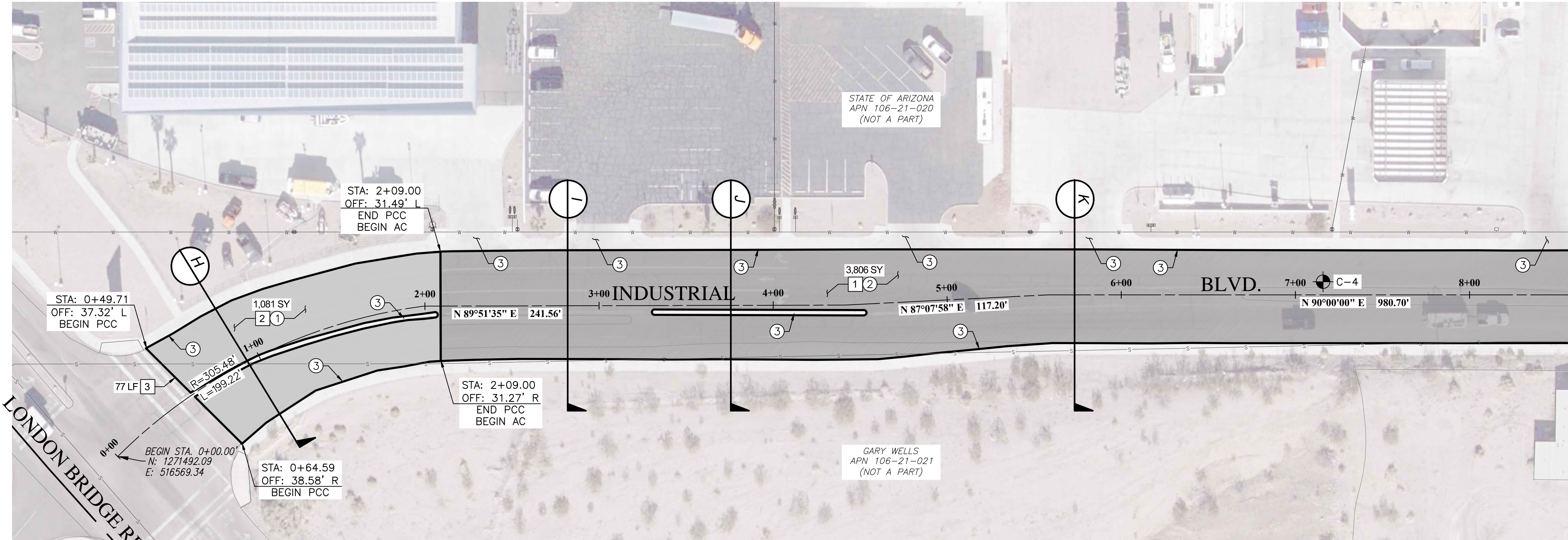
DATE:	JULY 2023	DRAWN BY:	CCP
DWG SCALE:	1"=20'	CHECKED BY:	EJP/SDP
PROJECT NO.:			
APPROVED BY:			

DRAWING NO.: **C-5**  
 SHEET 5 OF 16



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

C:\Trico Engineering, LLC\Projects\2023\12-08-086\_LAC\_Palo Verde South Pavement Revamp\Plan\12-08-086\_LAC\_Street Plans.dwg - LP: 7/16/2023 12:15 PM

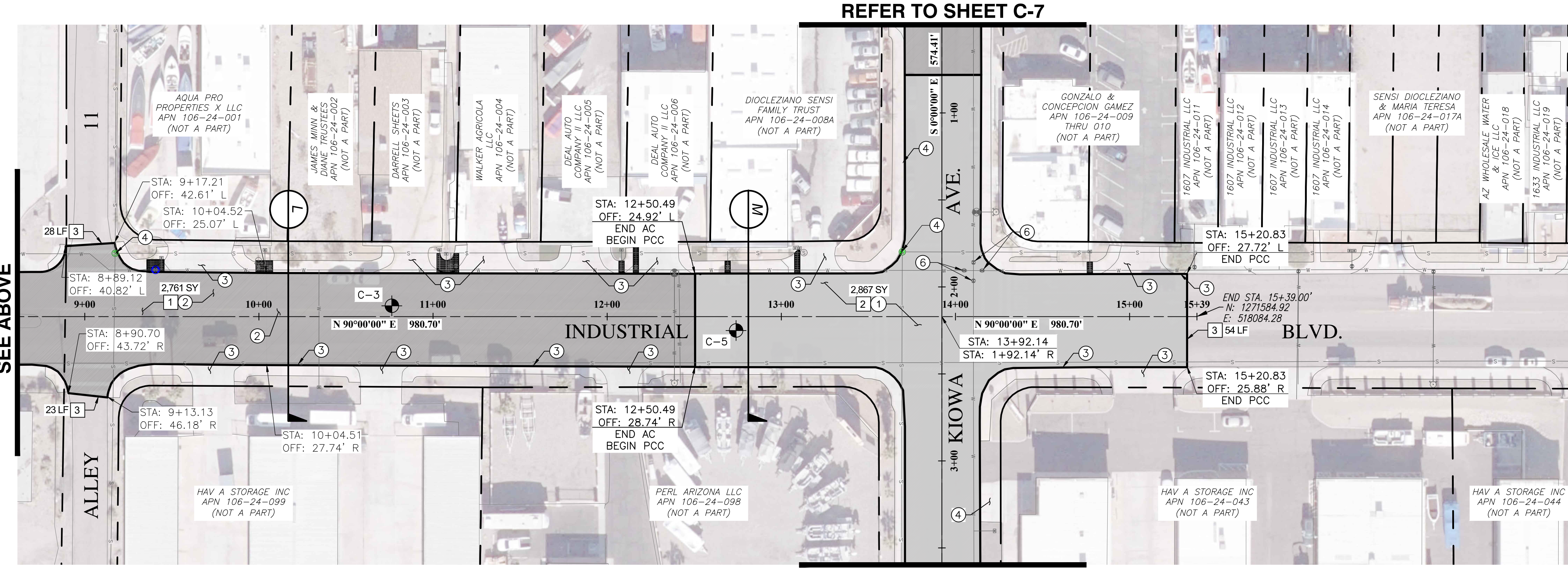


SEE BELOW

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  - ROTO-MILL 3" FULL DEPTH EXISTING AC PAVEMENT, AND REMOVE ADDITIONAL 3" INCHES AGGREGATE BASE.
  - SAWCUT EXISTING PAVEMENT AND/OR CONCRETE FULL DEPTH.

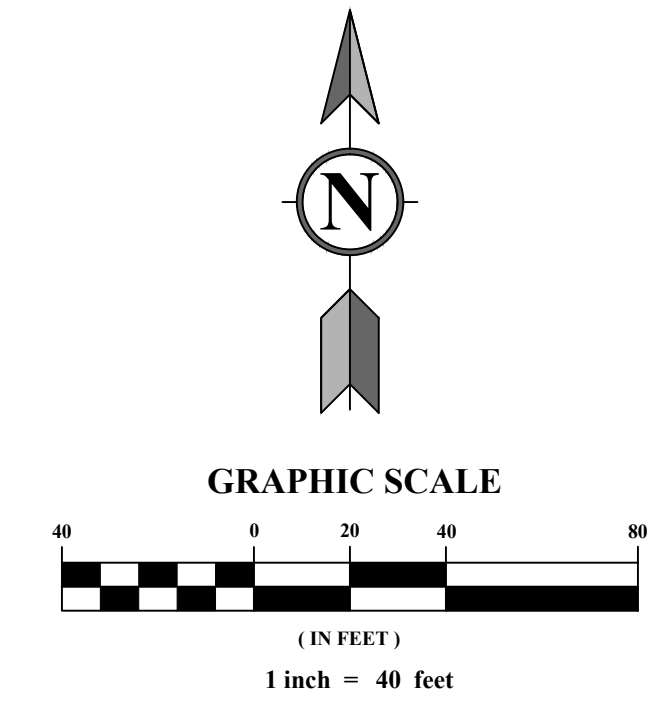
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  - ADJUST MANHOLE FRAME AND COVER PER MAG DETAIL 422.
  - ADJUST WATER VALVE CONCRETE COLLAR PER MAG DETAIL 391-2.
  - EX UTILITY TO BE ABANDONED PER WATER SHEET.



SEE ABOVE

REFER TO SHEET C-7

REFER TO SHEET C-7



Contact Arizona 811 at least two full working days before you begin excavation

Call 811 or click Arizona811.com

NO	DATE	DESCRIPTION



**TRICO ENGINEERING, LLC**

PRESENTS  
SEAN D. PERROTTI  
REGISTERED PROFESSIONAL ENGINEER  
STATE OF ARIZONA  
LICENSE NO. 127158492  
SCOTTSDALE, AZ 85258  
(928) 852-2116

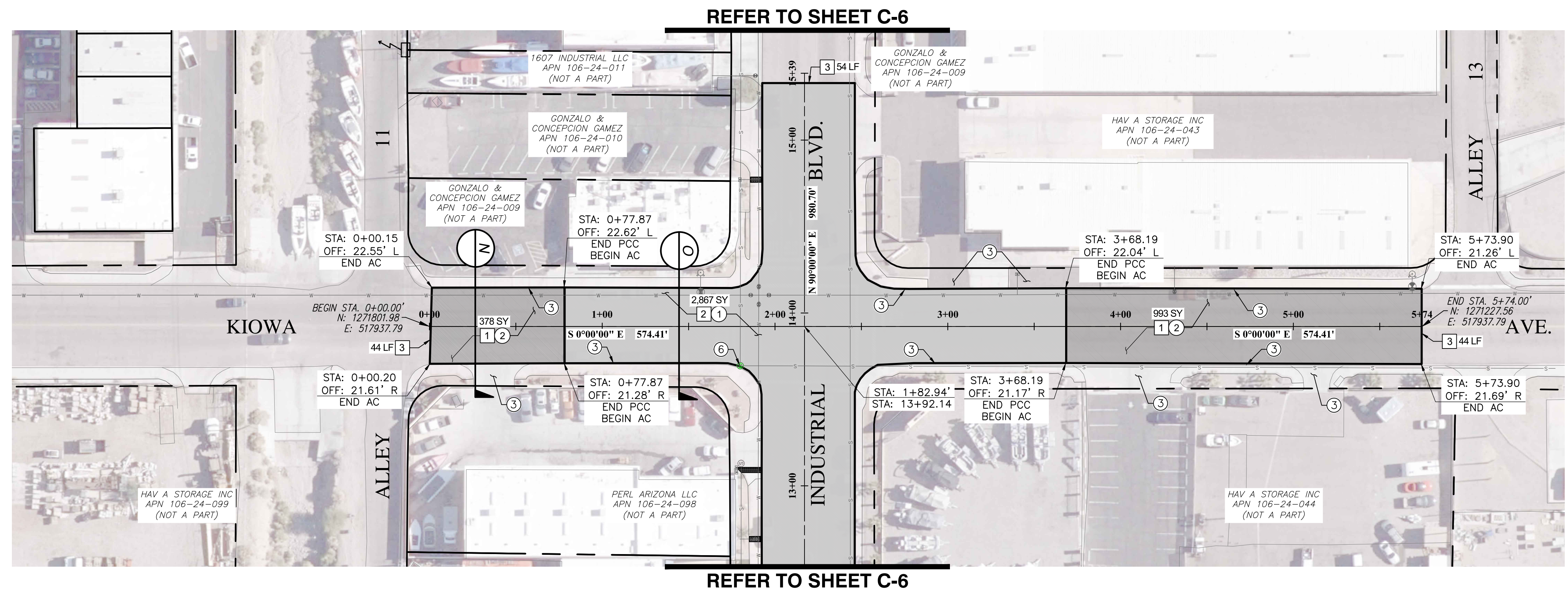
**PALO VERDE BLVD. S., INDUSTRIAL BLVD., & KIOWA AVE. PAVEMENT REHABILITATION PROJECT B24-PW-500396-108018**

LAKE HAVASU CITY  
2330 MCCULLOCH BLVD. N.  
LAKE HAVASU CITY, AZ 86403  
(928) 852-2116



DATE:	JULY 2023	DRAWN BY:	CCP
DWG SCALE:	1"=40'	CHECKED BY:	EPJ/SBP
PROJECT NO.:	B24-PW-500396-108018	APPROVED BY:	SJP
DRAWING NO.:	<b>C-6</b>	SHEET	6 OF 16

C:\Trico\Engineering\LLC\Projects\2023\12-086\_LIC\_Palo Verde South\Improvement Plans\12-086\_LIC\_Palo\_Verde\_South\_Improvement\_Plans\12-086\_LIC\_Palo\_Verde\_South\_Improvement\_Plans.dwg LS(6/29/2023 - 6/29/2023) - LP - 7/14/2023 12:16 PM

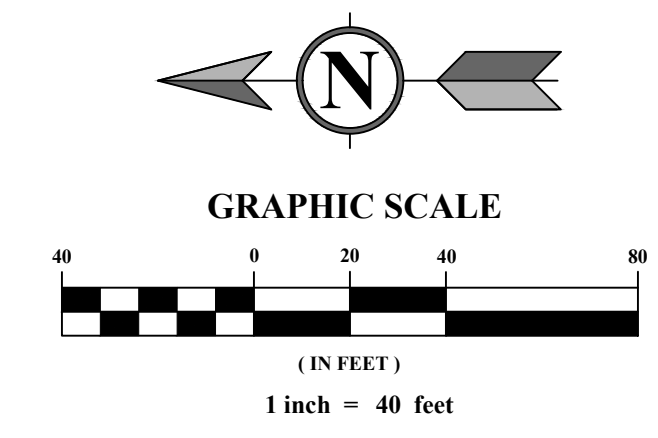


**REFER TO SHEET C-6**

- GENERAL NOTES:**
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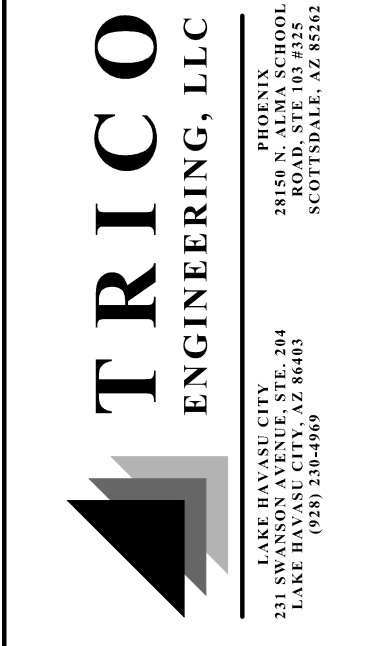
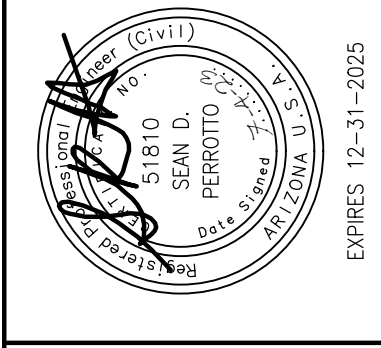
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  - ⑥ EX UTILITY TO BE ABANDONED PER WATER SHEET.



**REVISION RECORD**

NO	DATE	DESCRIPTION



PALO VERDE BLVD., S.,  
INDUSTRIAL BLVD., & KIOWA AVE.,  
PAVEMENT REHABILITATION  
PROJECT B24-PW-500396-108018

LAKE HAVASU CITY  
2330 MCCULLOCH BLVD. N.  
LAKE HAVASU CITY, AZ 86403  
(928) 852-2116

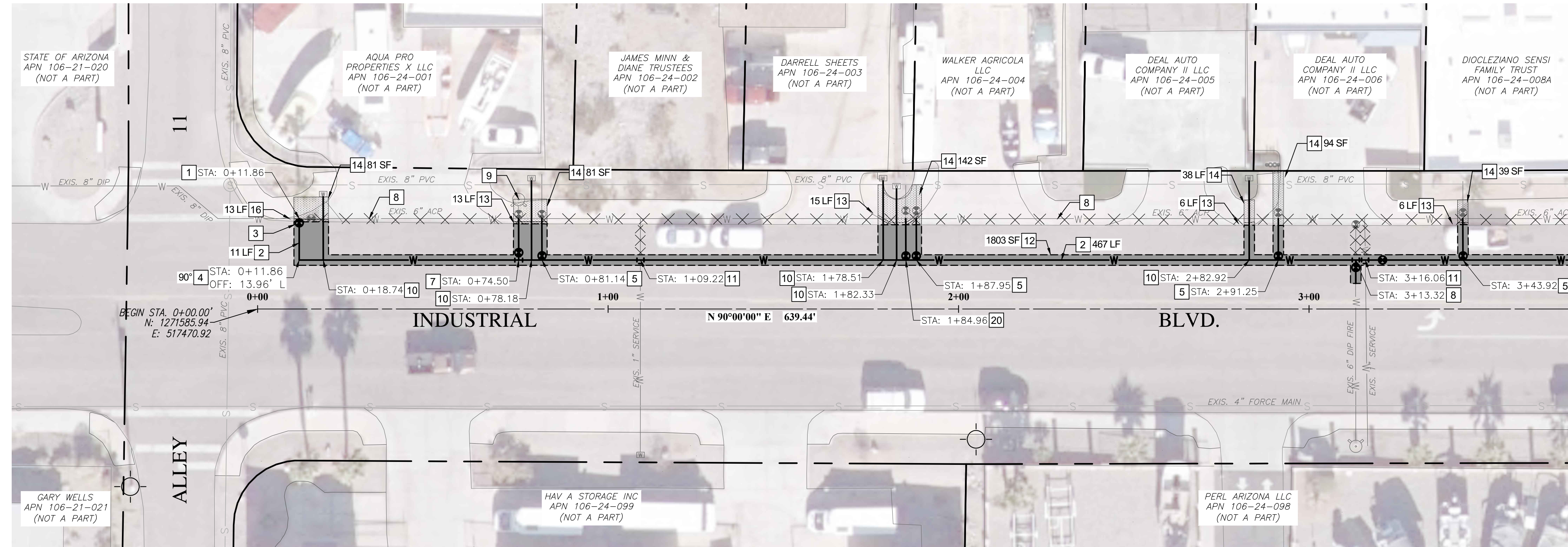


**KIOWA AVE. STREET IMPROVEMENTS**

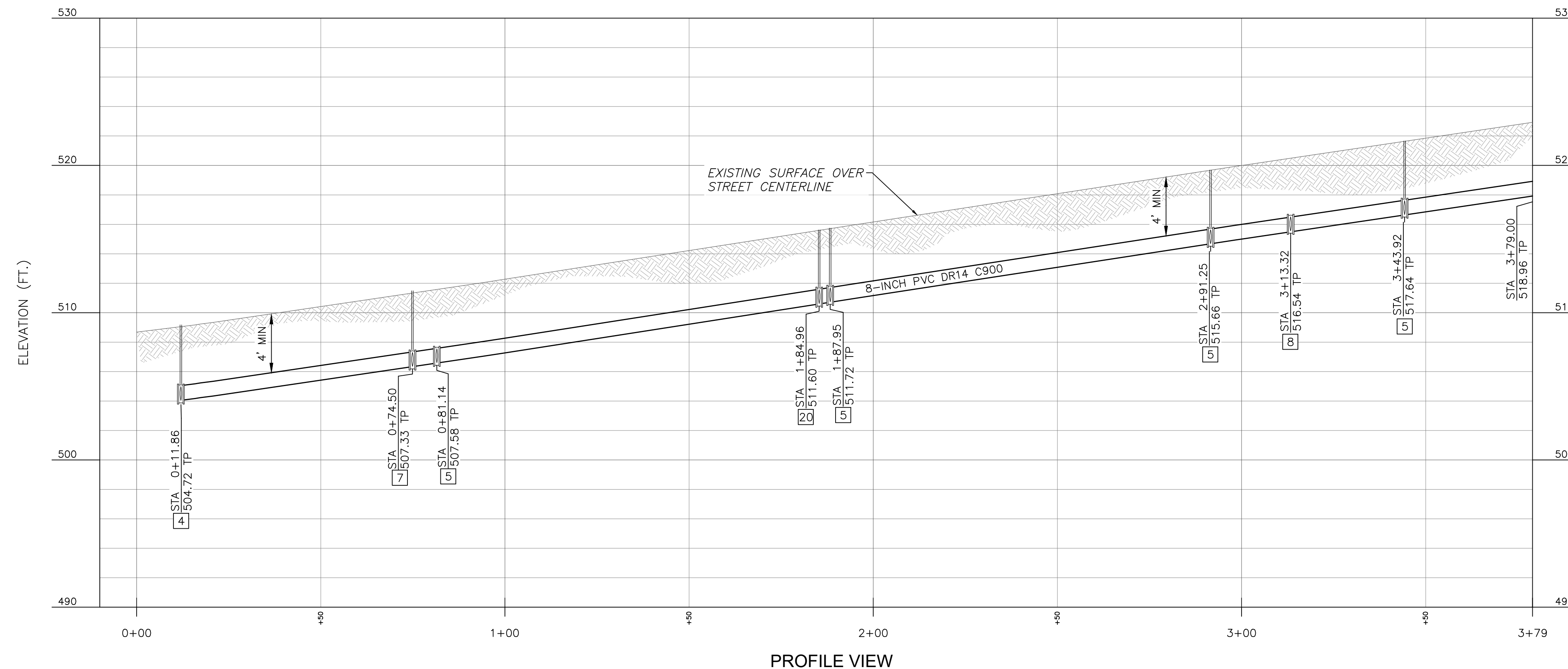
DATE:	JULY 2023	DRAWN BY:	CCP
DWG SCALE:	1"=40'	CHECKED BY:	EJP/SBP
PROJECT NO:		APPROVED BY:	SJP

DRAWING NO: **C-7**

SHEET 7 OF 16



PLAN VIEW

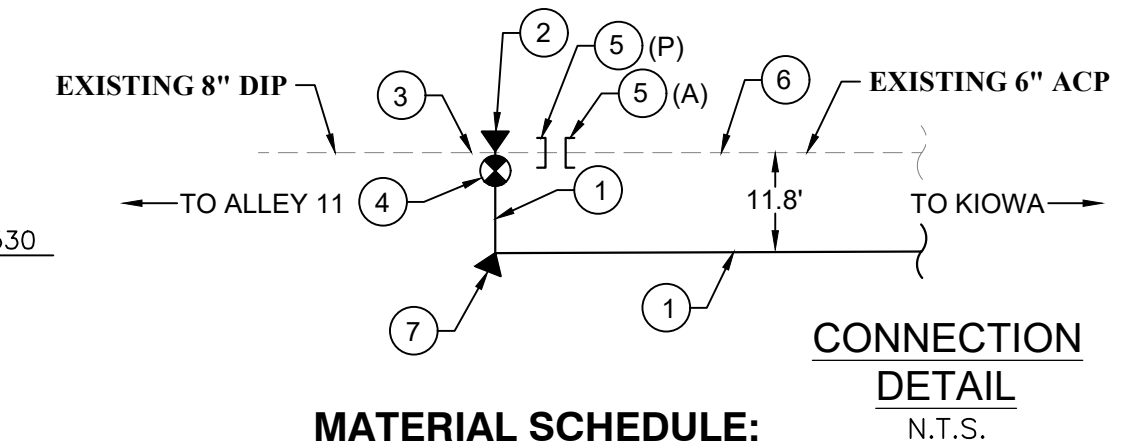


PROFILE VIEW

REFER TO SHEET C-9

**CONSTRUCTION NOTES:**

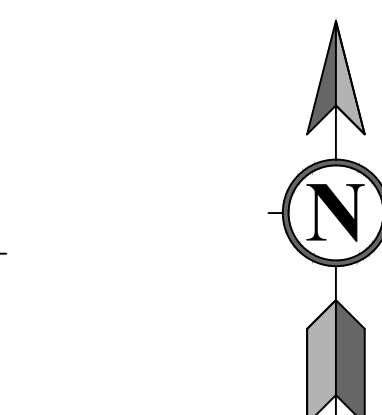
- 1 INSTALL DI TEE PER LHC SPECIFICATION 02550. USE FLEX COUPLINGS FOR CONNECTION TO EXISTING PIPE. SIZE PER PLAN.
- 2 INSTALL 8-INCH PVC C900 DR14 PIPE PER LHC STD. DTL. NO. 200. ON SHEET C-14. LENGTH PER PLAN.
- 3 INSTALL 8-INCH GATE VALVE WITH RISER PER LHC STD. DTL. NO. 300. ON SHEET C-15.
- 4 INSTALL DI FITTING WITH RESTRAINED JOINT PER LHC SPECIFICATION 02550. SIZE AND ANGLE PER PLAN.
- 5 EXTEND 4" FIRE LINE CONNECTION PER DTL. NO. 3 ON SHEET C-16.
- 6 SHORTEN 4" FIRE LINE CONNECTION PER DTL. NO. 4 ON SHEET C-16.
- 7 EXTEND 6" FIRE HYDRANT CONNECTION PER DTL. NO. 320 ON SHEET C-15.
- 8 SHORTEN 6" FIRE HYDRANT CONNECTION PER DTL. NO. 320 ON SHEET C-15.
- 9 EXISTING WATER APPURTENANCE TO REMAIN IN PLACE.
- 10 INSTALL 1-INCH COPPER SERVICE ASSEMBLY PER LHC STD. DTL. NO. 303. ON SHEET C-15.
- 11 INSTALL 1-INCH COPPER SERVICE CONNECTION PER LHC STD. DTL. NO. 303. ON SHEET C-15.
- 12 SAWCUT, REMOVE, AND REPLACE (6" WIDE) 2.5' COLD PATCH PER LIMITS SHOWN IN LHC STD. DTL. NO. 200. ON SHEET C-14.
- 13 REMOVE AND REPLACE 6" CURB TO NEAREST EXPANSION JOINT PER LHC STD. DTL. NO. 213. ON SHEET C-14.
- 14 REMOVE AND REPLACE SIDEWALK TO NEAREST EXPANSION JOINT PER LHC STD. DTL. NO. 216. ON SHEET C-14.
- 15 ABANDON EXISTING PIPE PER LHC STD. SPECIFICATION 02550.
- 16 INSTALL 8-INCH WATERLINE PIPE PLUG PER DETAIL 1 OF SHEET C-16.
- 17 CONTRACTOR TO ABANDON EXISTING INLINE WATER VALVE, LEAVING THE VALVE TO REMAIN OPEN / REMOVE THE RISER AND LID ONCE VALVE IS ABANDONED.
- 18 CONTRACTOR TO REMOVE EXISTING DRIVEWAY AND APPROACH TO LIMITS SHOWN, AND REPLACE WITH DRIVEWAY PER LHC STD. DTL. NO. 201.
- 19 EXISTING RIM AND/OR MANHOLE LID ELEVATION TO BE ADJUSTED TO FINISHED SURFACE.
- 20 EXTEND 2" FIRE HYDRANT CONNECTION PER DTL. NO. 3 ON SHEET C-15.



**MATERIAL SCHEDULE:**

- 1 8" C-900 DR14 PVC PIPE
- 2 8" DI TEE WITH THRUST BLOCK
- 3 EXISTING WATER LINE TO REMAIN
- 4 8" DI GATE VALVE W/ NUT OPR & VALVE BOX
- 5 8" DI CAP DENOTED WITH AN "A" OR "P" ON CONNECTION DETAIL
- 6 EXISTING WATER TO BE ABANDONED
- 7 8" 90° DI FITTING W/ THRUST BLOCK
- 8 INSTALL 8" PIPE COUPLING.

ELEVATION (FT.)



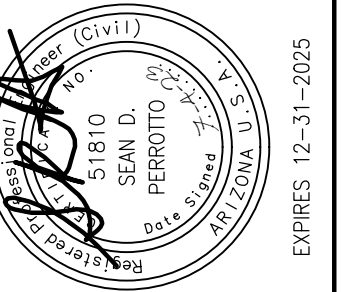
GRAPHIC SCALE

(IN FEET)  
1 inch = 20 feet

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

REVISION RECORD

NO.	DATE	DESCRIPTION



**TRICO**  
ENGINEERING, LLC  
PREMISES:  
2330 MCCULLOCH BLVD. N.  
LAKE HAVASU CITY, AZ 86403  
(928) 852-2116

**PALO VERDE BLVD., S.,  
INDUSTRIAL BLVD., & KIOWA AVE.,  
PAVEMENT REHABILITATION  
PROJECT B24-PW-500396-108018**  
LAKE HAVASU CITY  
2330 MCCULLOCH BLVD. N.  
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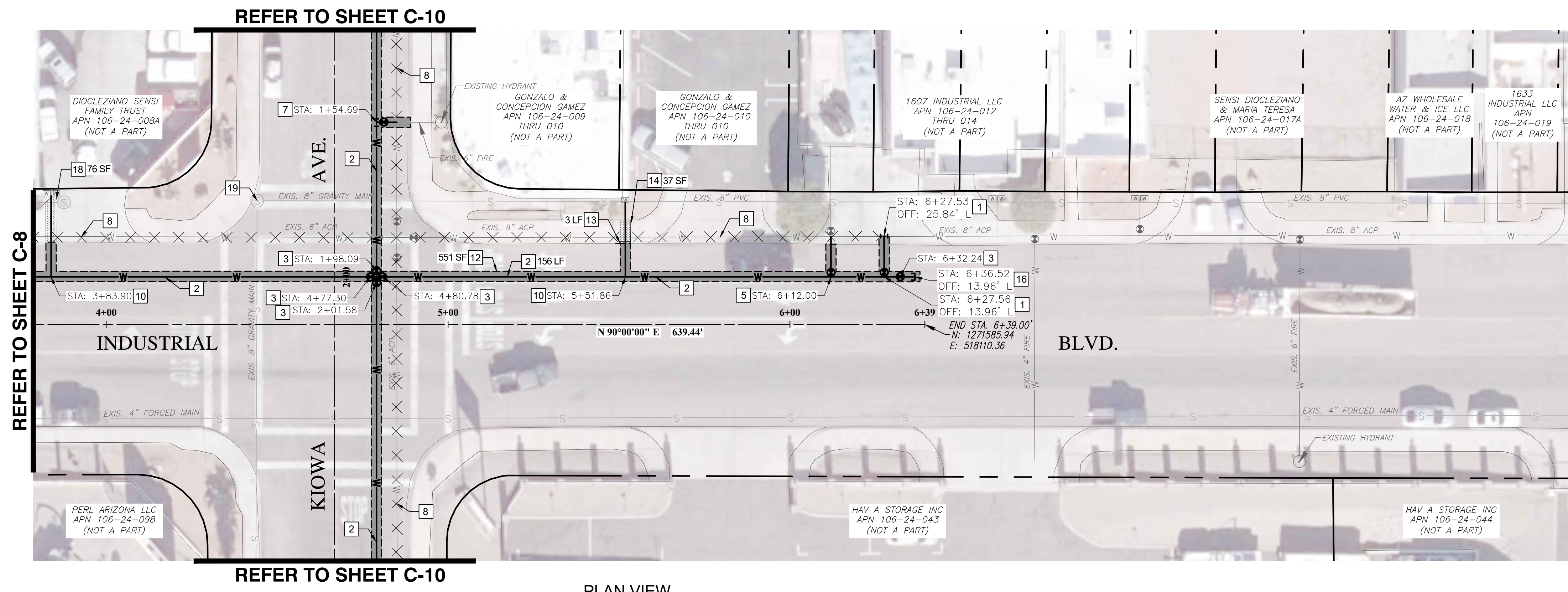
**INDUSTRIAL BLVD. J  
WATERLINE IMPROVEMENTS**  
DATE: JULY 2023 DRAWN BY: CCP  
DWG SCALE: 1"=20' CHECKED BY: EJP/SDP  
PROJECT NO: 22-086  
APPROVED BY: SDP

DRAWING NO.:  
**C-8**  
SHEET 8 OF 16

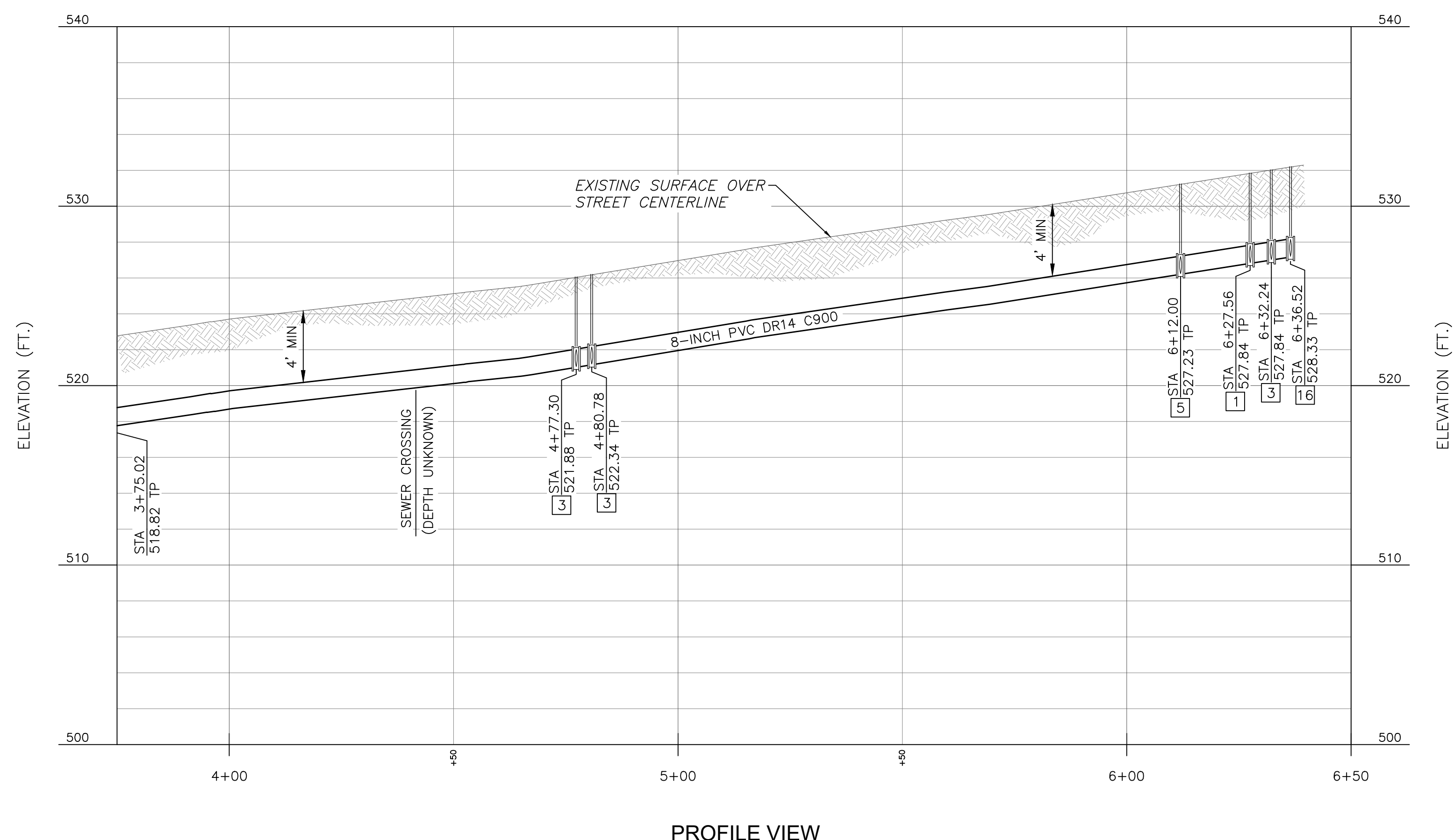
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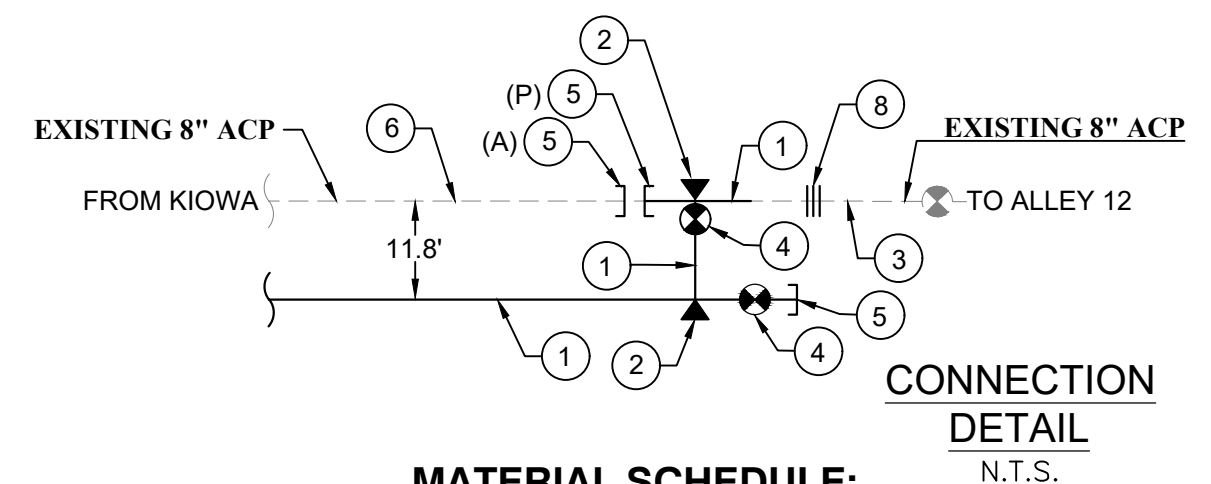


PLAN VIEW



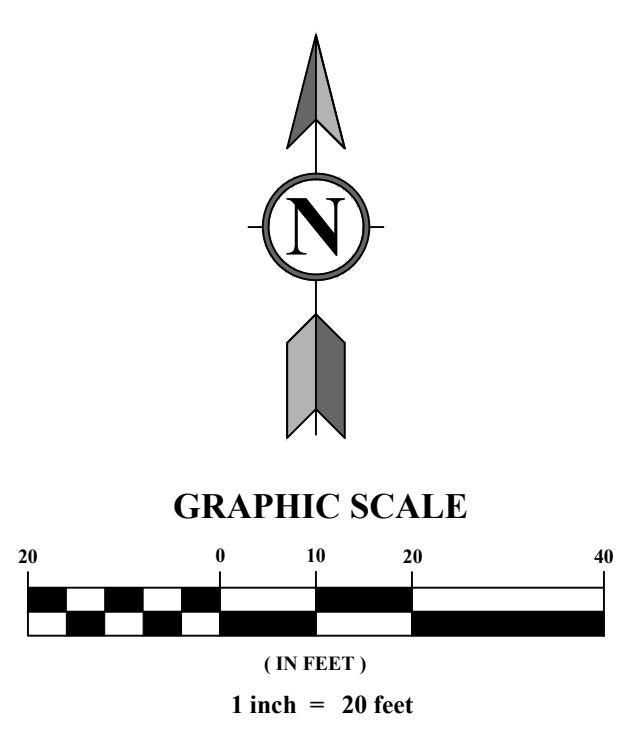
PROFILE VIEW

- CONSTRUCTION NOTES:**
- 1 INSTALL DI TEE PER LHC SPECIFICATION 02550. USE FLEX COUPLINGS FOR CONNECTION TO EXISTING PIPE. SIZE PER PLAN.
  - 2 INSTALL 8-INCH PVC C900 DR14 PIPE PER LHC STD. DTL. NO. 200. ON SHEET C-14. LENGTH PER PLAN.
  - 3 INSTALL 8-INCH GATE VALVE WITH RISER PER LHC STD. DTL. NO. 300. ON SHEET C-15.
  - 4 INSTALL DI FITTING WITH RESTRAINED JOINT PER LHC SPECIFICATION 02550. SIZE AND ANGLE PER PLAN.
  - 5 EXTEND 4" FIRE LINE CONNECTION PER DTL. NO. 3 ON SHEET C-16.
  - 6 SHORTEN 4" FIRE LINE CONNECTION PER DTL. NO. 4 ON SHEET C-16.
  - 7 EXTEND 6" FIRE HYDRANT CONNECTION PER DTL. NO. 320 ON SHEET C-15.
  - 8 SHORTEN 6" FIRE HYDRANT CONNECTION PER DTL. NO. 320 ON SHEET C-15.
  - 9 EXISTING WATER APPURTENANCE TO REMAIN IN PLACE.
  - 10 INSTALL 1-INCH COPPER SERVICE ASSEMBLY PER LHC STD. DTL. NO. 303. ON SHEET C-15.
  - 11 INSTALL 1-INCH COPPER SERVICE CONNECTION PER LHC STD. DTL. NO. 303. ON SHEET C-15.
  - 12 SAWCUT, REMOVE, AND REPLACE (6" WIDE) 2.5' COLD PATCH PER LIMITS SHOWN IN LHC STD. DTL. NO. 200. ON SHEET C-14.
  - 13 REMOVE AND REPLACE 6" CURB TO NEAREST EXPANSION JOINT PER LHC STD. DTL. NO. 213. ON SHEET C-14.
  - 14 REMOVE AND REPLACE SIDEWALK TO NEAREST EXPANSION JOINT PER LHC STD. DTL. NO. 216. ON SHEET C-14.
  - 15 ABANDON EXISTING PIPE PER LHC STD. SPECIFICATION 02550.
  - 16 INSTALL 8-INCH WATERLINE PIPE PLUG PER DETAIL 1 OF SHEET C-16.
  - 17 CONTRACTOR TO ABANDON EXISTING INLINE WATER VALVE, LEAVING THE VALVE TO REMAIN OPEN / REMOVE THE RISER AND LID ONCE VALVE IS ABANDONED.
  - 18 CONTRACTOR TO REMOVE EXISTING DRIVEWAY AND APPROACH TO LIMITS SHOWN, AND REPLACE WITH DRIVEWAY PER LHC STD. DTL. NO. 201.
  - 19 EXISTING RIM AND/OR MANHOLE LID ELEVATION TO BE ADJUSTED TO FINISHED SURFACE.
  - 20 EXTEND 2" FIRE HYDRANT CONNECTION PER DTL. NO. 3 ON SHEET C-15.



MATERIAL SCHEDULE:

- 1 8" C-900 DR14 PVC PIPE
- 2 8" DI TEE WITH THRUST BLOCK
- 3 EXISTING WATER TO REMAIN
- 4 8" DI GATE VALVE W/ NUT OPR & VALVE BOX
- 5 8" DI CAP DENOTED WITH AN 'A' OR 'P' ON CONNECTION DETAIL
- 6 EXISTING WATER TO BE ABANDONED
- 7 INSTALL 8" TRANSITION PIPE COUPLING.



Contact Arizona 811 at least two full working days before you begin excavation

Call 811 or click Arizona811.com

REVISION RECORD	DESCRIPTION
NO.	DATE

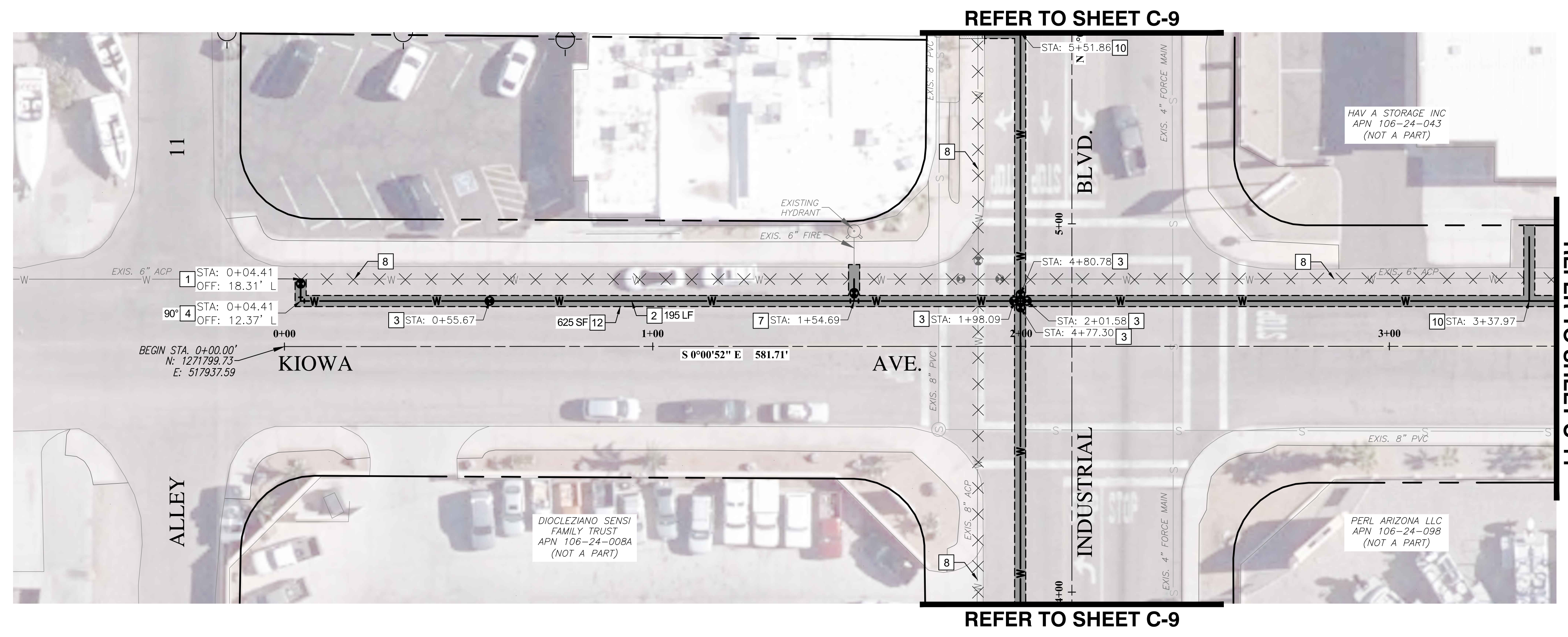
**TRICO ENGINEERING, LLC**

PREPARED BY: SEAN D. PERROTTI  
 2330 MCCULLOCH BLVD. N.  
 LAKE HAVASU CITY, AZ 86403  
 (928) 852-2116

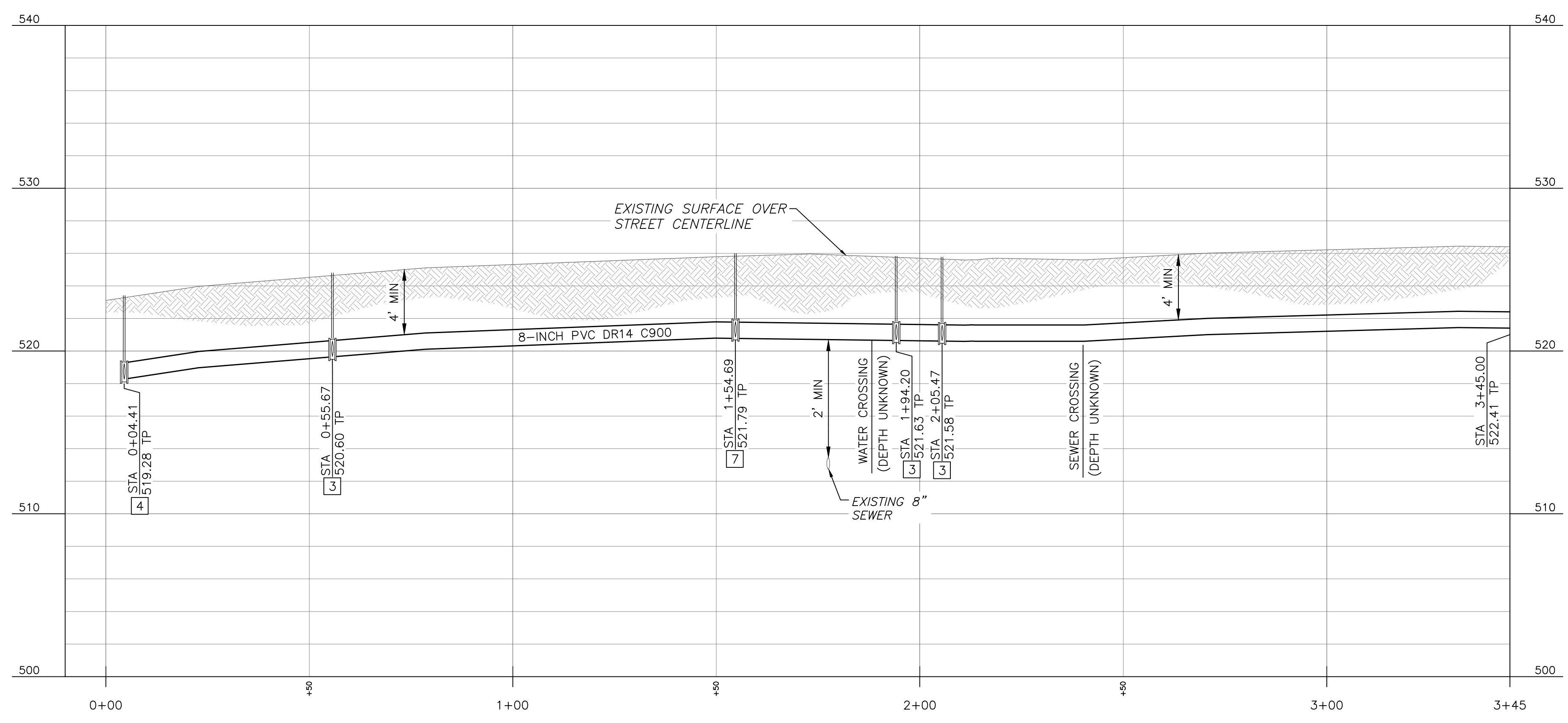
**INDUSTRIAL BLVD. S.,  
 INDUSTRIAL BLVD., & KIOWA AVE.  
 PAVEMENT REHABILITATION  
 PROJECT B24-PW-500396-108018**

LAKE HAVASU CITY  
 2330 MCCULLOCH BLVD. N.  
 LAKE HAVASU CITY, AZ 86403  
 (928) 852-2116

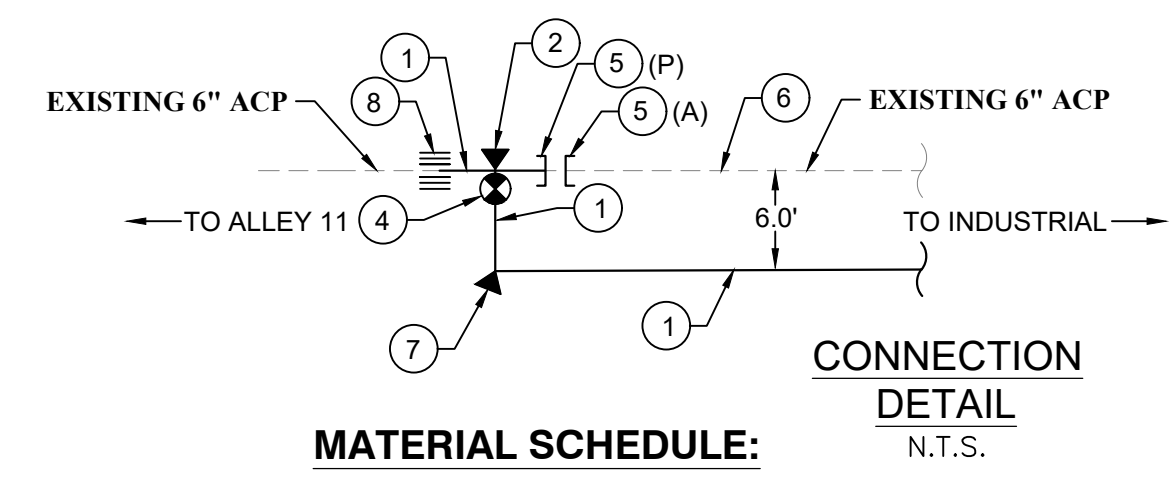
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DWG SCALE: 1"=20'	CHECKED BY: EJP/SDP
PROJECT NO:	APPROVED BY:
DRAWING NO.: <b>C-9</b>	
SHEET 9 OF 16	



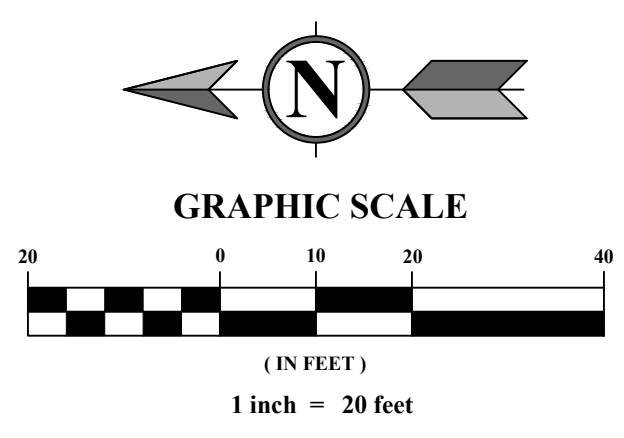
PLAN VIEW



- CONSTRUCTION NOTES:**
- INSTALL DI TEE PER LHC SPECIFICATION 02550. USE FLEX COUPLINGS FOR CONNECTION TO EXISTING PIPE. SIZE PER PLAN.
  - INSTALL 8-INCH PVC C900 DR14 PIPE PER LHC STD. DTL. NO. 200. ON SHEET C-14. LENGTH PER PLAN.
  - INSTALL 8-INCH GATE VALVE WITH RISER PER LHC STD. DTL. NO. 300. ON SHEET C-15.
  - INSTALL DI FITTING WITH RESTRAINED JOINT PER LHC SPECIFICATION 02550. SIZE AND ANGLE PER PLAN.
  - EXTEND 4" FIRE LINE CONNECTION PER DTL. NO. 3 ON SHEET C-16.
  - SHORTEN 4" FIRE LINE CONNECTION PER DTL. NO. 4 ON SHEET C-16.
  - EXTEND 6" FIRE HYDRANT CONNECTION PER DTL. NO. 320 ON SHEET C-15.
  - SHORTEN 6" FIRE HYDRANT CONNECTION PER DTL. NO. 320 ON SHEET C-15.
  - EXISTING WATER APPURTENANCE TO REMAIN IN PLACE.
  - INSTALL 1-INCH COPPER SERVICE ASSEMBLY PER LHC STD. DTL. NO. 303. ON SHEET C-15.
  - INSTALL 1-INCH COPPER SERVICE CONNECTION PER LHC STD. DTL. NO. 303. ON SHEET C-15.
  - SAWCUT, REMOVE, AND REPLACE (6" WIDE) 2.5" COLD PATCH PER LIMITS SHOWN IN LHC STD. DTL. NO. 200. ON SHEET C-14.
  - REMOVE AND REPLACE 6" CURB TO NEAREST EXPANSION JOINT PER LHC STD. DTL. NO. 213. ON SHEET C-14.
  - REMOVE AND REPLACE SIDEWALK TO NEAREST EXPANSION JOINT PER LHC STD. DTL. NO. 216. ON SHEET C-14.
  - ABANDON EXISTING PIPE PER LHC STD. SPECIFICATION 02550.
  - INSTALL 8-INCH WATERLINE PIPE PLUG PER DETAIL 1 OF SHEET C-16.
  - CONTRACTOR TO ABANDON EXISTING INLINE WATER VALVE, LEAVING THE VALVE TO REMAIN OPEN / REMOVE THE RISER AND LID ONCE VALVE IS ABANDONED.
  - CONTRACTOR TO REMOVE EXISTING DRIVEWAY AND APPROACH TO LIMITS SHOWN, AND REPLACE WITH DRIVEWAY PER LHC STD. DTL. NO. 201.
  - EXISTING RIM AND/OR MANHOLE LID ELEVATION TO BE ADJUSTED TO FINISHED SURFACE.
  - EXTEND 2" FIRE HYDRANT CONNECTION PER DTL. NO. 3 ON SHEET C-15.

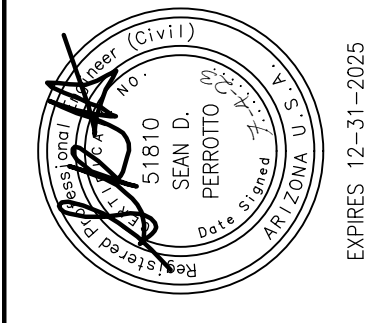


- MATERIAL SCHEDULE:**
- 8" C-900 DR14 PVC PIPE
  - 8" DI TEE WITH THRUST BLOCK
  - EXISTING WATER TO REMAIN
  - 8" DI GATE VALVE W/ NUT OPR & VALVE BOX
  - 8" DI CAP DENOTED WITH AN "A" OR "P" ON CONNECTION DETAIL
  - EXISTING WATER TO BE ABANDONED
  - 8" 90° DI FITTING W/ THRUST BLOCK
  - 8" TRANSITION PIPE COUPLING



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

NO.	DATE	DESCRIPTION



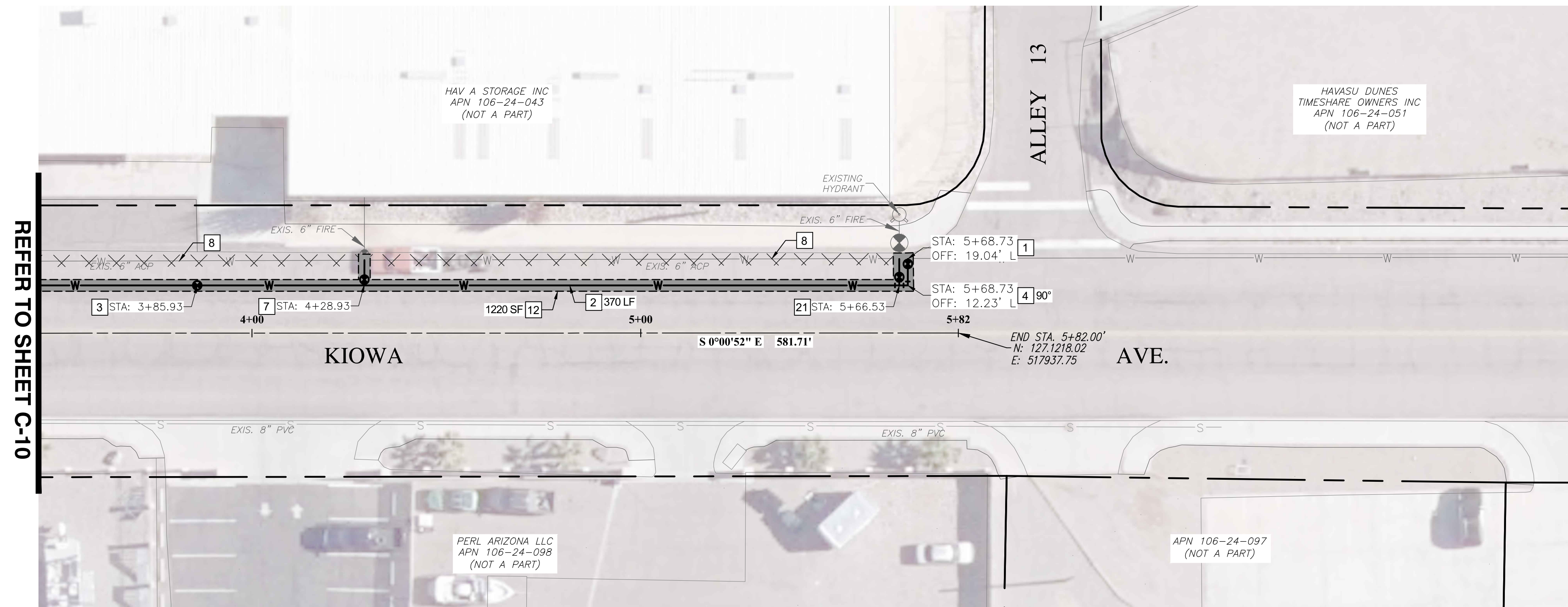
**TRICO ENGINEERING, LLC**  
PREPARED BY: SEAN D. PERROTTO  
211 W. WASHINGTON AVENUE, SUITE 200  
LAKE HAVASU CITY, AZ 86403  
(928) 855-2116

**PALO VERDE BLVD., S., INDUSTRIAL BLVD., & KIOWA AVE. PAVEMENT REHABILITATION PROJECT B24-PW-500396-108018**  
LAKE HAVASU CITY  
2330 MCCULLOCH BLVD. N.  
LAKE HAVASU CITY, AZ 86403  
(928) 855-2116

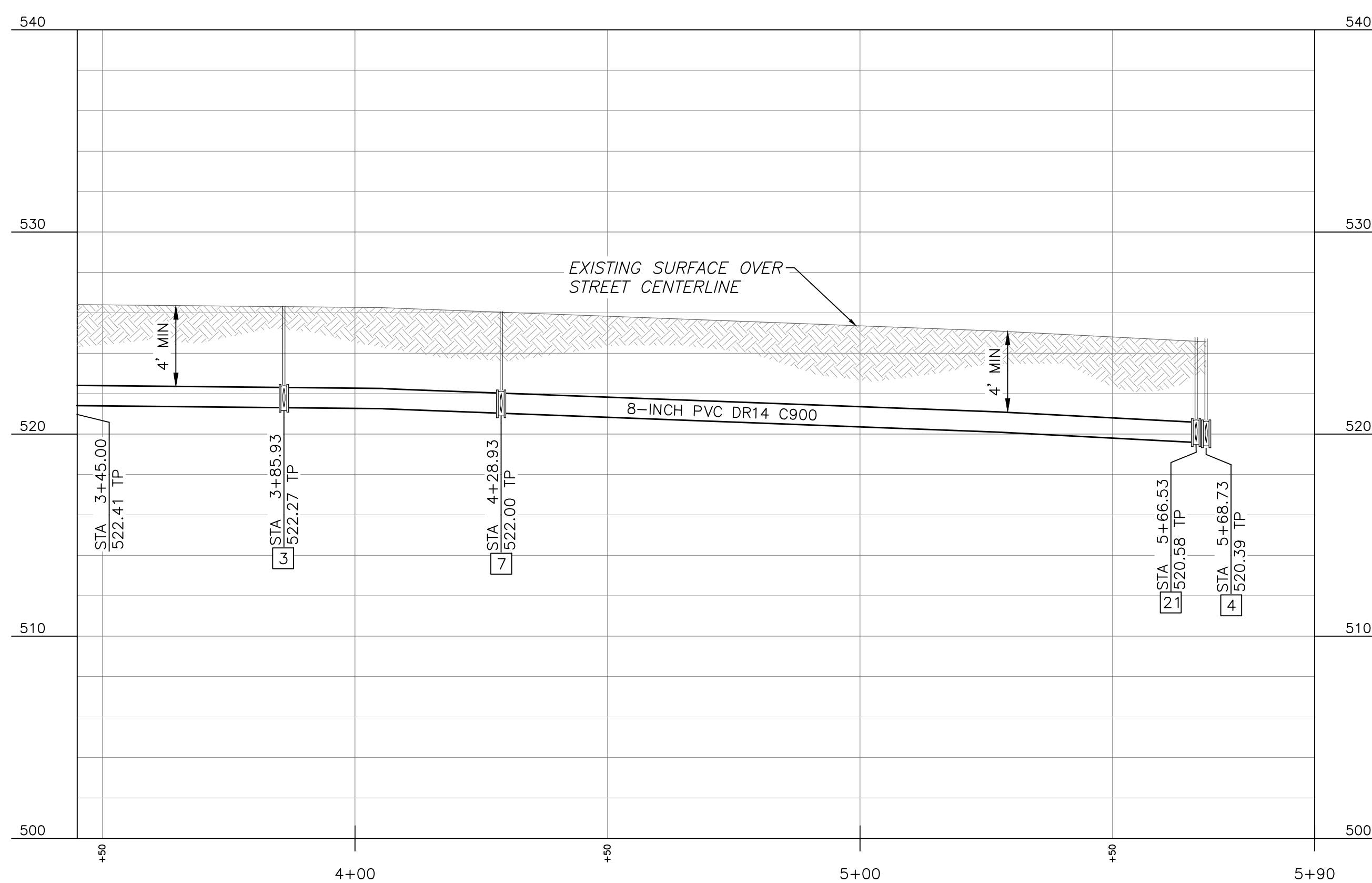


**KIOWA AVE. I WATERLINE IMPROVEMENTS**  
DATE: JULY 2023 DRAWN BY: CCP  
DWG SCALE: 1"=20' CHECKED BY: EJP/SDP  
PROJECT NO: 22-086  
APPROVED BY: SDP

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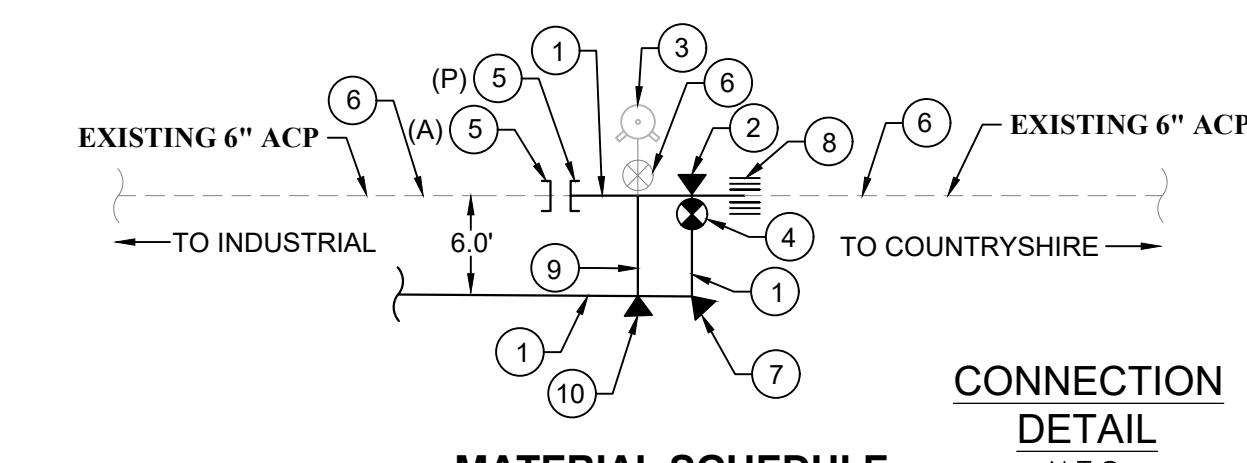
PLAN VIEW



PROFILE VIEW

**CONSTRUCTION NOTES:**

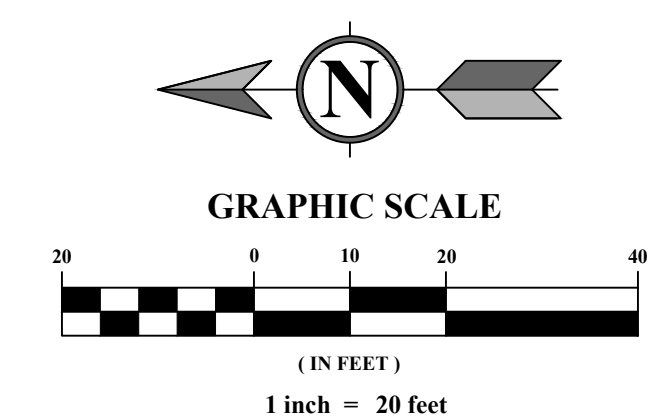
- 1 INSTALL DI TEE PER LHC SPECIFICATION 02550. USE FLEX COUPLINGS FOR CONNECTION TO EXISTING PIPE. SIZE PER PLAN.
- 2 INSTALL 8-INCH PVC C900 DR14 PIPE PER LHC STD. DTL. NO. 200. ON SHEET C-14. LENGTH PER PLAN.
- 3 INSTALL 8-INCH GATE VALVE WITH RISER PER LHC STD. DTL. NO. 300. ON SHEET C-15.
- 4 INSTALL DI FITTING WITH RESTRAINED JOINT PER LHC SPECIFICATION 02550. SIZE AND ANGLE PER PLAN.
- 5 EXTEND 4" FIRE LINE CONNECTION PER DTL. NO. 3 ON SHEET C-16.
- 6 SHORTEN 4" FIRE LINE CONNECTION PER DTL. NO. 4 ON SHEET C-16.
- 7 EXTEND 6" FIRE HYDRANT CONNECTION PER DTL. NO. 320 ON SHEET C-15.
- 8 SHORTEN 6" FIRE HYDRANT CONNECTION PER DTL. NO. 320 ON SHEET C-15.
- 9 EXISTING WATER APPURTENANCE TO REMAIN IN PLACE.
- 10 INSTALL 1-INCH COPPER SERVICE ASSEMBLY PER LHC STD. DTL. NO. 303. ON SHEET C-15.
- 11 INSTALL 1-INCH COPPER SERVICE CONNECTION PER LHC STD. DTL. NO. 303. ON SHEET C-15.
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- 20 EXTEND 2" FIRE HYDRANT CONNECTION PER DTL. NO. 3 ON SHEET C-15.



CONNECTION DETAIL  
N.T.S.

**MATERIAL SCHEDULE:**

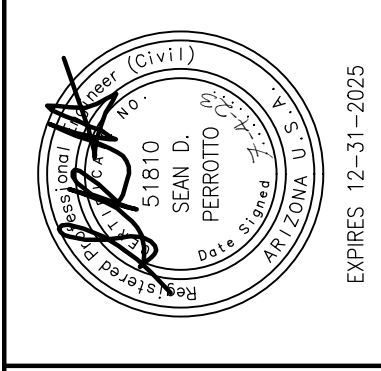
- 1 8" C-900 DR14 PVC PIPE
- 2 8" DI TEE WITH THRUST BLOCK
- 3 EXISTING WATER TO REMAIN
- 4 8" DI GATE VALVE W/ NUT OPR & VALVE BOX
- 5 8" DI CAP DENOTED WITH AN "A" OR "P" ON CONNECTION DETAIL
- 6 EXISTING WATER TO BE ABANDONED
- 7 8" 90° DI FITTING W/ THRUST BLOCK
- 8 8" TRANSITION PIPE COUPLING
- 9 6" FIRE LINE EXTENSION
- 10 8"x6" DI TEE WITH THRUST BLOCK



Contact Arizona 811 at least two full working days before you begin excavation

Call 811 or click Arizona811.com

REVISION RECORD	
NO	DATE



**TRICO ENGINEERING, LLC**

PREPARED BY: SEAN D. PERROTTI  
 2110 AVA AVENUE, SUITE 200  
 LAKE HAVASU CITY, AZ 86403  
 (928) 234-6849

**PALO VERDE BLVD., S., INDUSTRIAL BLVD., & KIOWA AVE. PAVEMENT REHABILITATION PROJECT B24-PW-500396-108018**

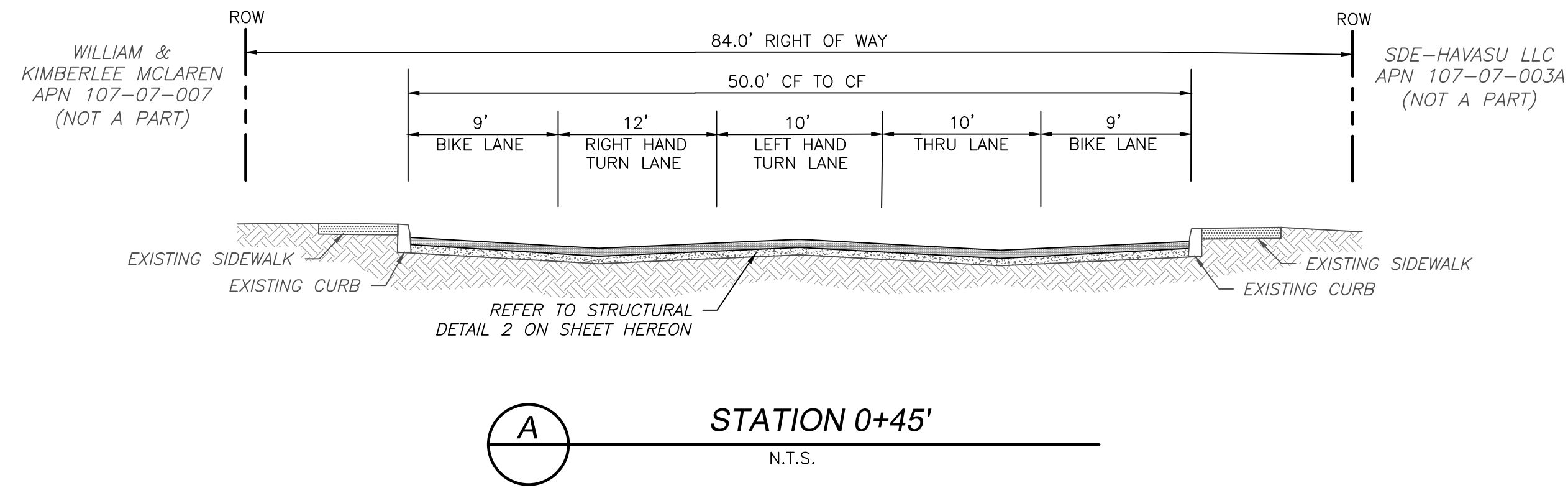
LAKE HAVASU CITY  
 2330 MCCULLOCH BLVD. N.  
 LAKE HAVASU CITY, AZ 86403  
 (928) 855-2116



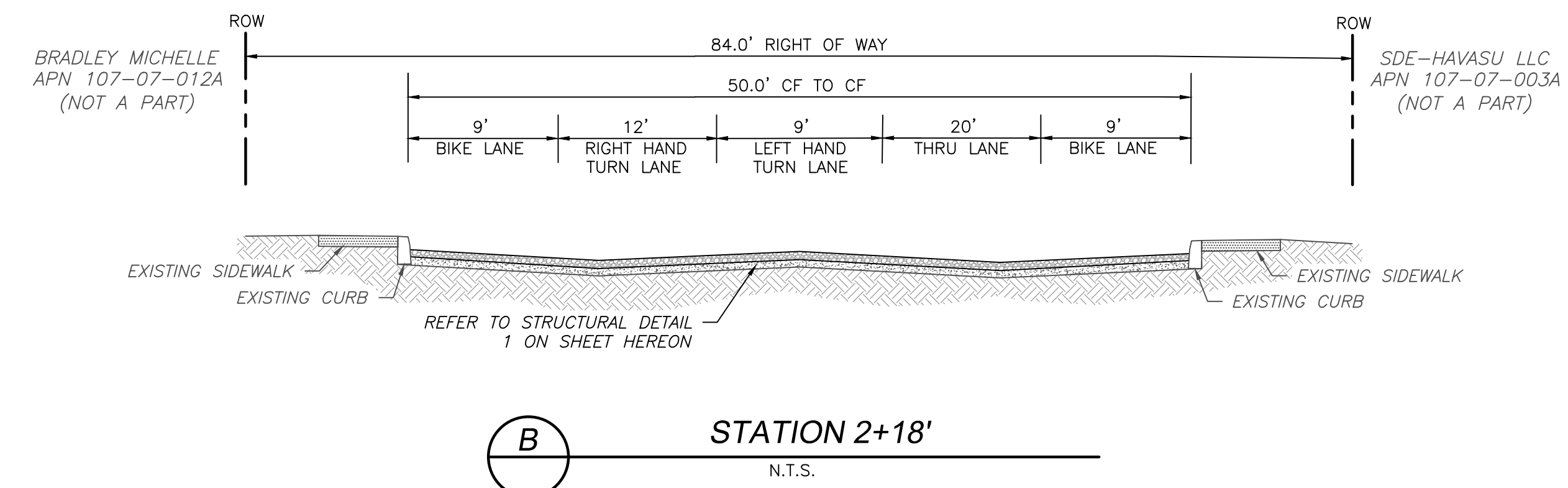
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	DWG SCALE:	1"=20'	CHECKED BY:	EPJ/SDP
	PROJECT NO.:		APPROVED BY:	

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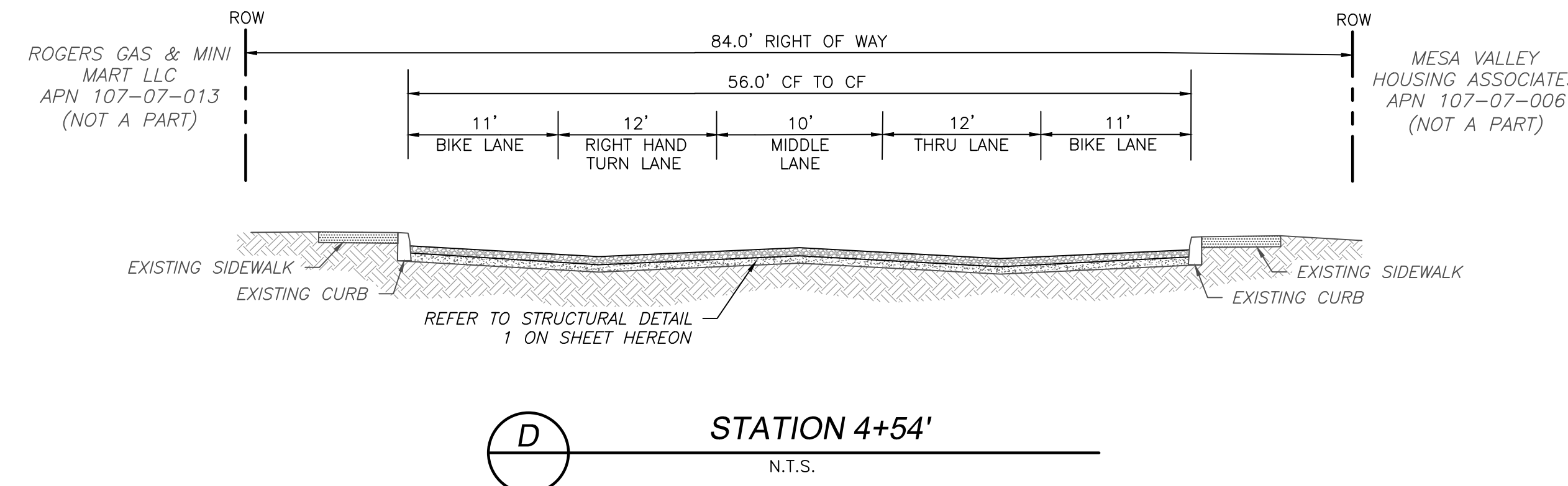
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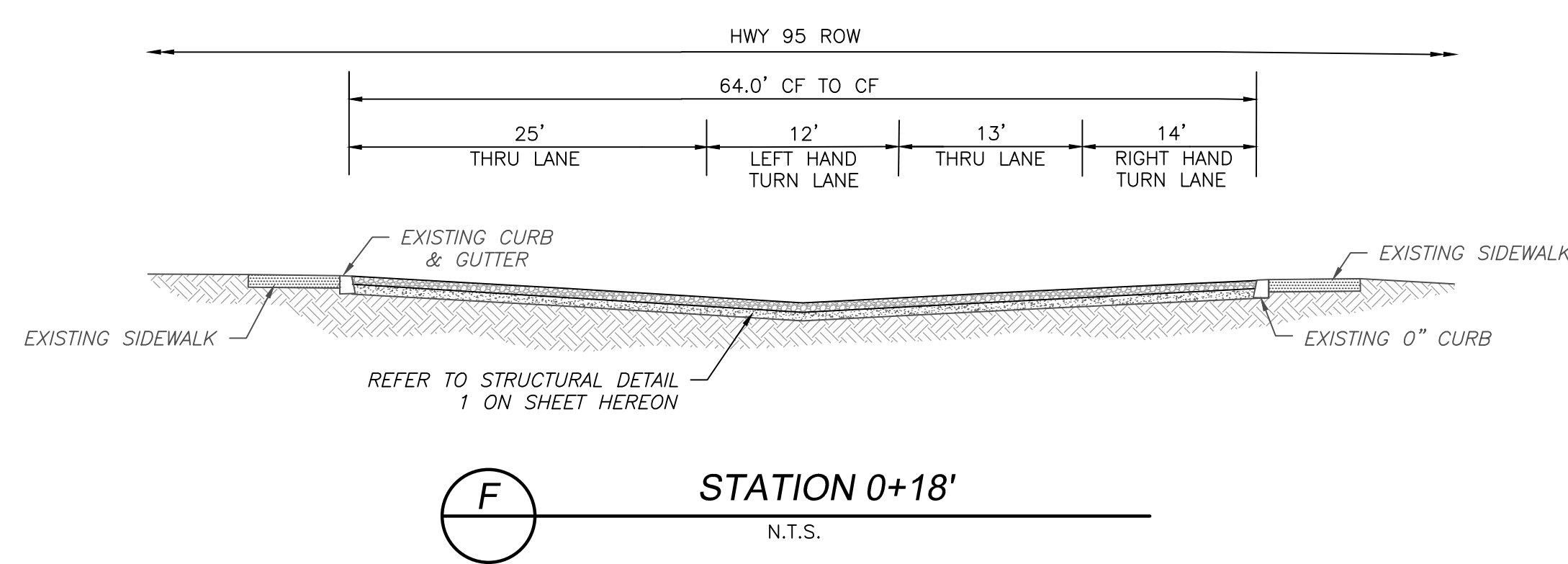
**A** STATION 0+45'  
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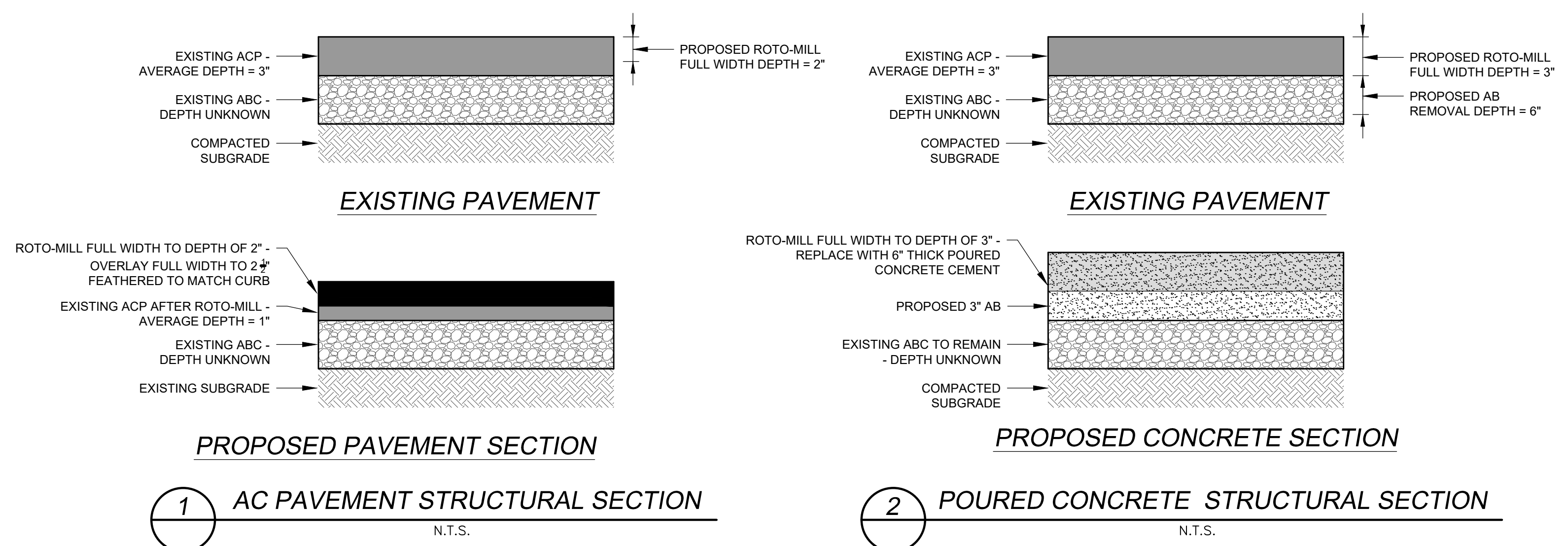
**B** STATION 2+18'  
N.T.S.



**D** STATION 4+54'  
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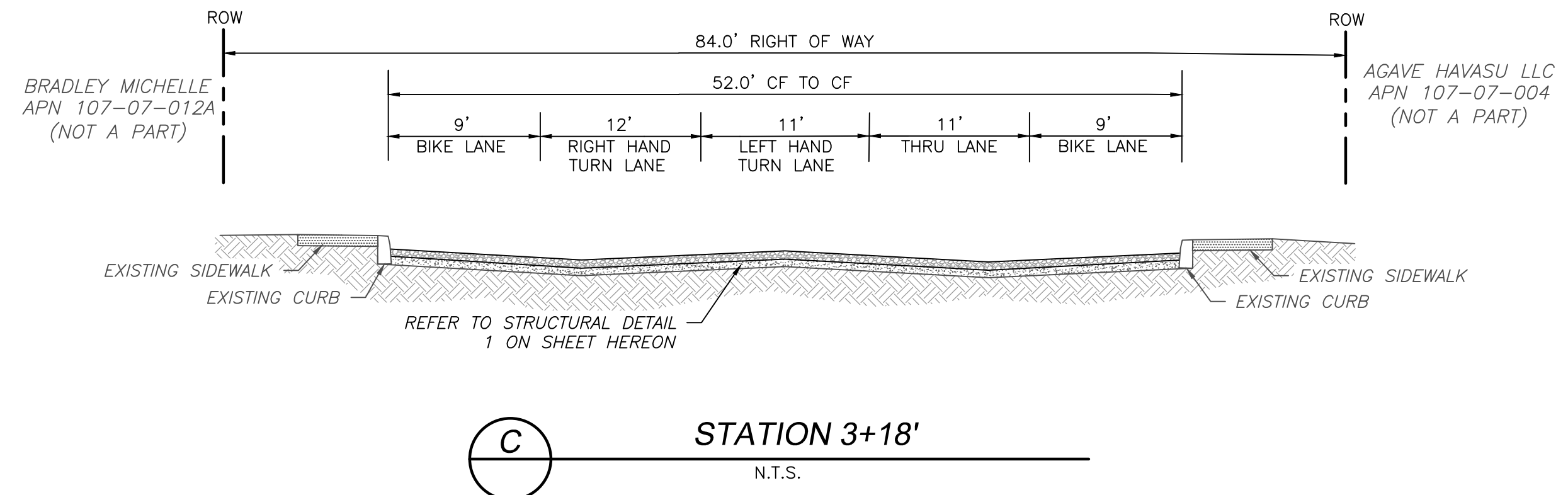


**F** STATION 0+18'  
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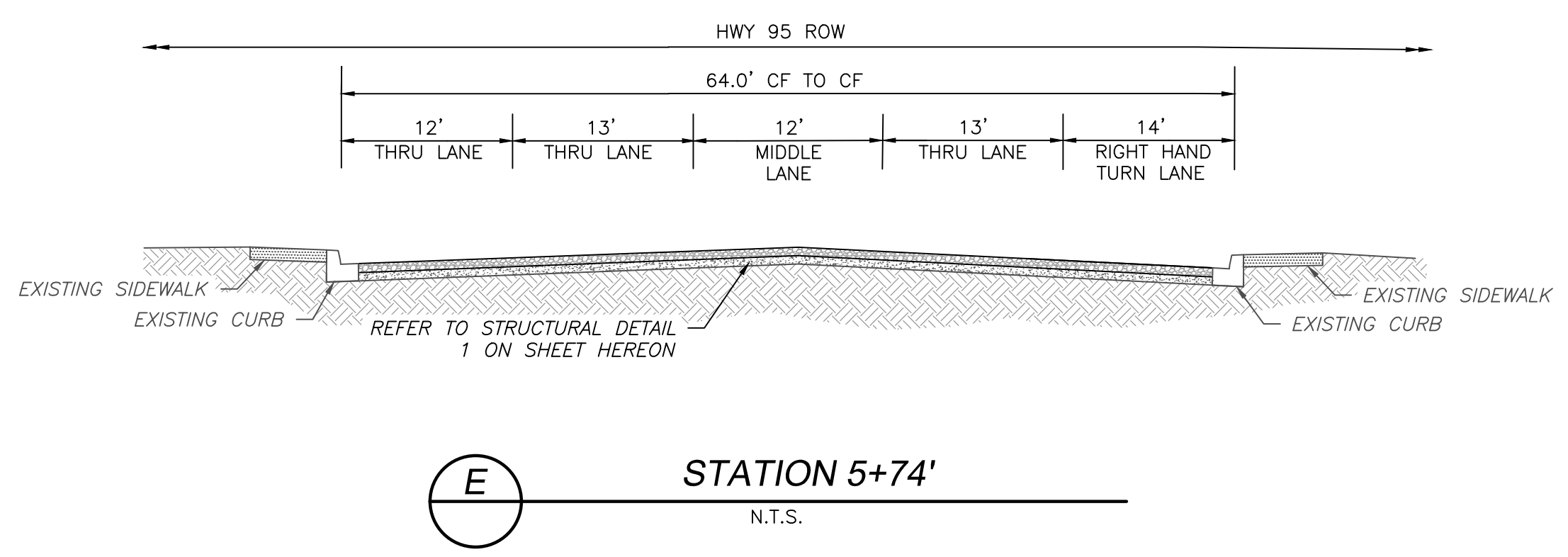


**1** AC PAVEMENT STRUCTURAL SECTION  
N.T.S.

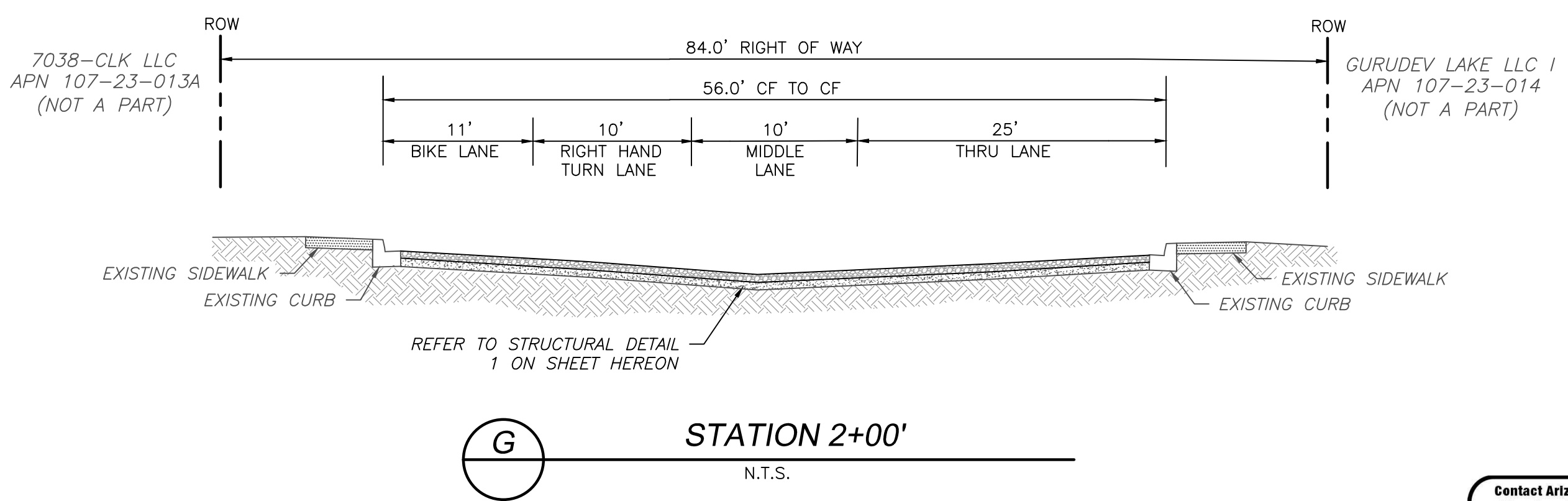
**2** POURED CONCRETE STRUCTURAL SECTION  
N.T.S.



**C** STATION 3+18'  
N.T.S.



**E** STATION 5+74'  
N.T.S.



**G** STATION 2+00'  
N.T.S.

**PALO VERDE BLVD. S.**



REVISION RECORD

NO.	DATE	DESCRIPTION

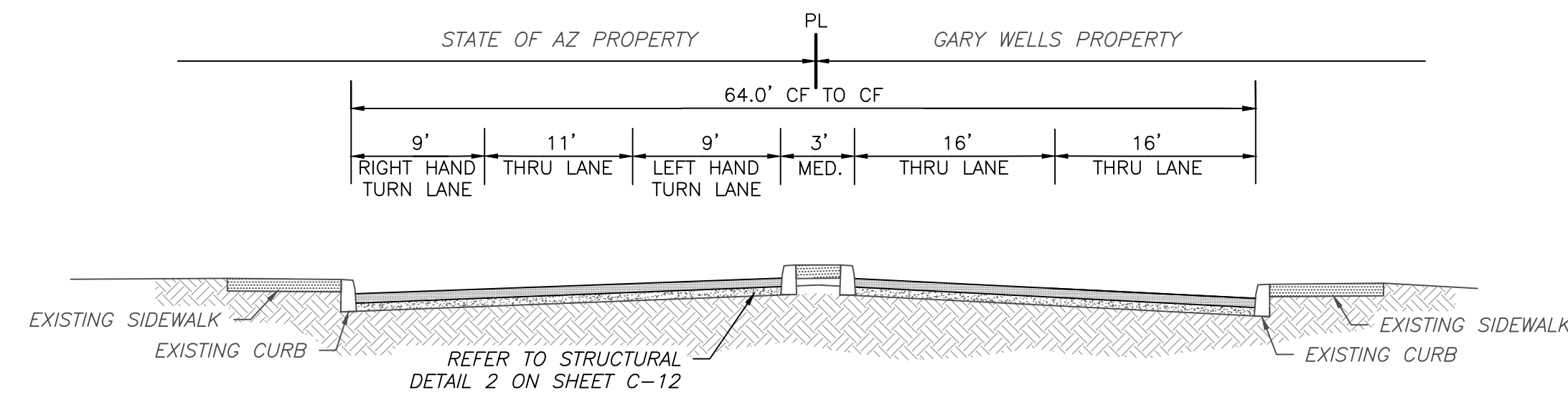
**TRICO ENGINEERING, LLC**  
 PRESENTS  
 SEAN D. PEROTTO  
 LICENSED PROFESSIONAL ENGINEER  
 LICENSE NO. 12001  
 STATE OF ARIZONA  
 211 AVENUE AVENUE  
 LAKE HAVASU CITY, AZ 86403  
 (928) 852-2116

**PALO VERDE BLVD. S., INDUSTRIAL BLVD., & KIOWA AVE. PAVEMENT REHABILITATION PROJECT B24-PW-500396-108018**  
 LAKE HAVASU CITY  
 2300 McCULLOCH BLVD. N.  
 LAKE HAVASU CITY, AZ 86403  
 (928) 852-2116

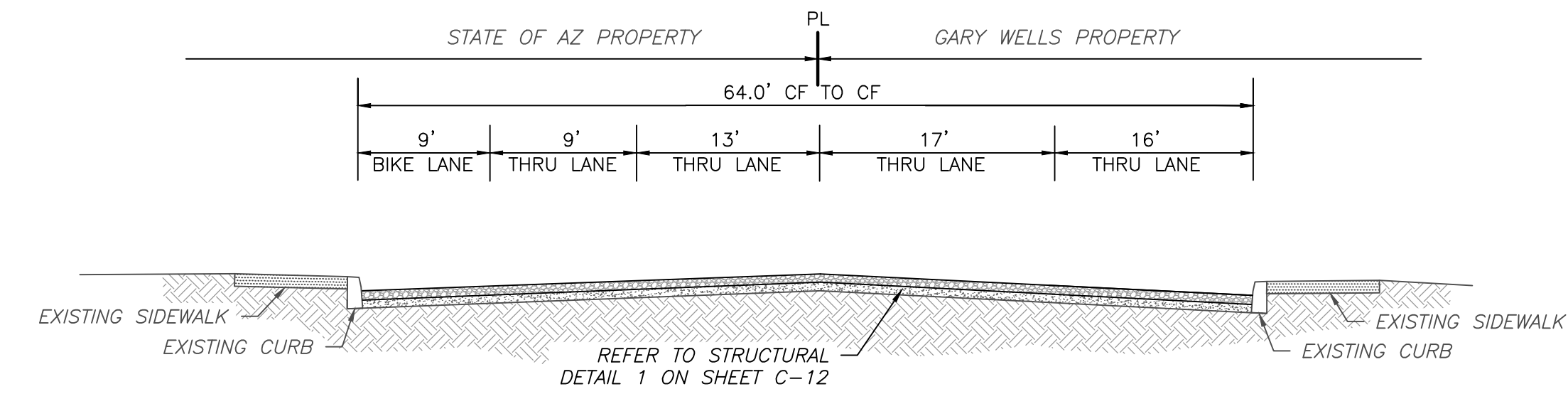


**TYPICAL STREET SECTIONS I**

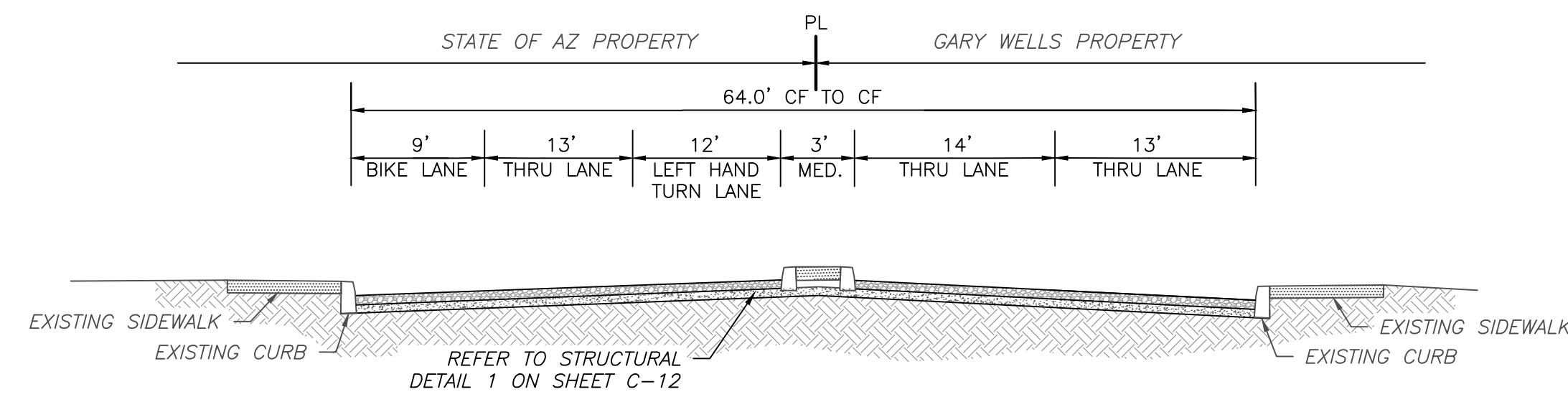
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DWG SCALE:	N.T.S.	CHECKED BY:	EPJ/SBP
PROJECT NO.:		APPROVED BY:	



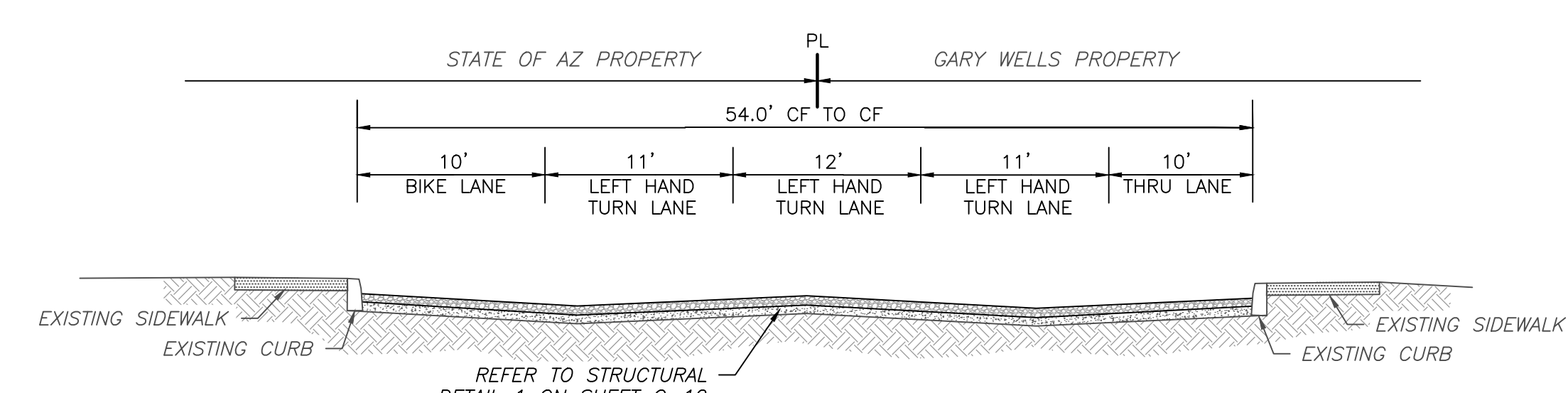
**H** STATION 0+93'  
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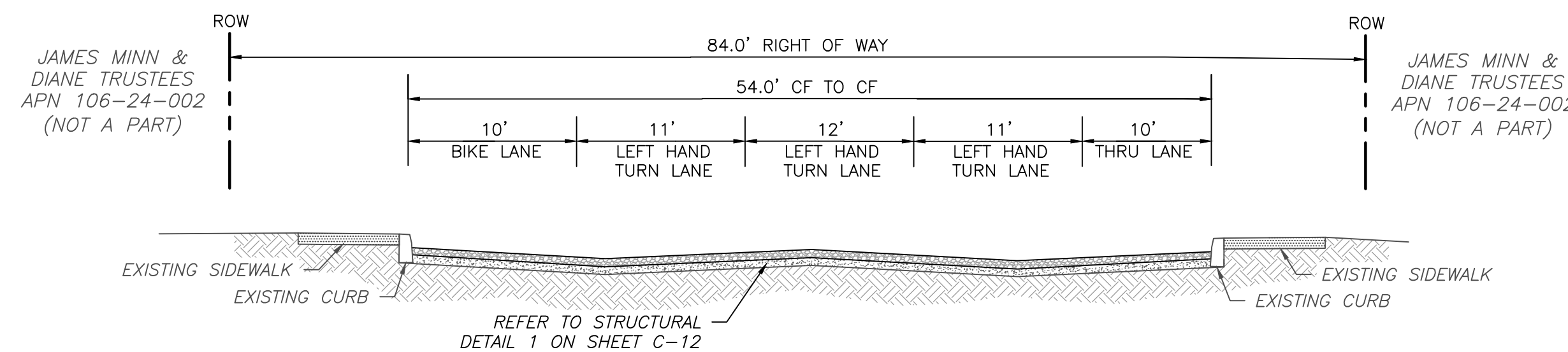
**I** STATION 2+82'  
N.T.S.



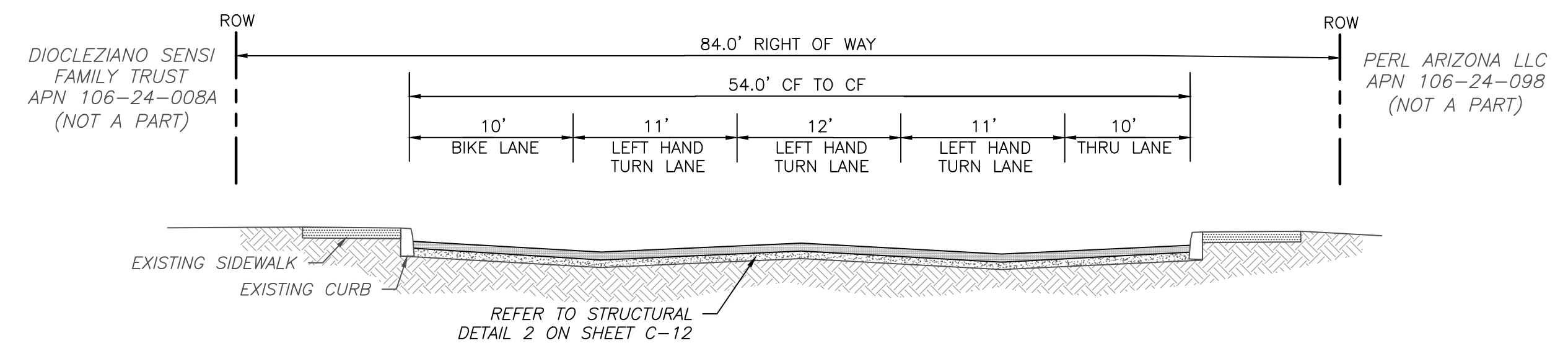
**J** STATION 3+76'  
N.T.S.



**K** STATION 5+74'  
N.T.S.

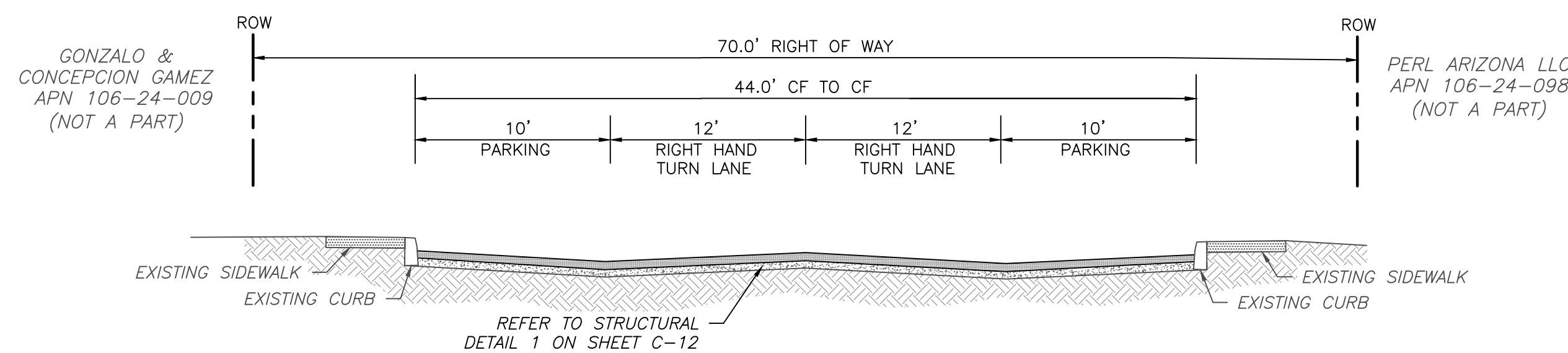


**L** STATION 10+17'  
N.T.S.

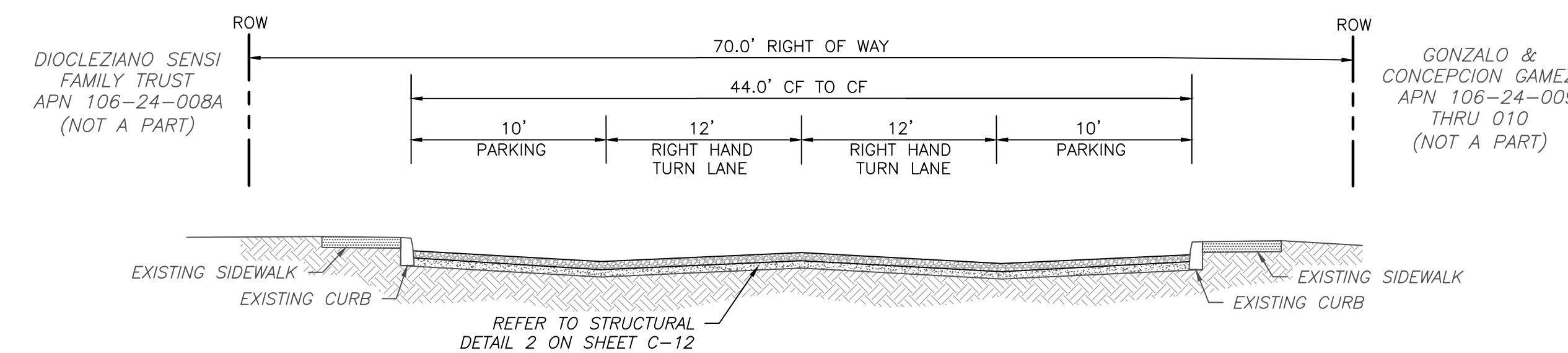


**M** STATION 12+81'  
N.T.S.

**INDUSTRIAL BLVD.**



**N** STATION 0+26'  
N.T.S.

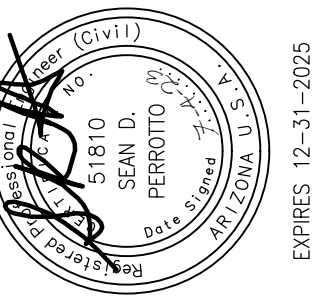


**O** STATION 1+45'  
N.T.S.

**KIOWA AVE.**



NO.	DATE	DESCRIPTION



**TRICO ENGINEERING, LLC**  
 PRESENTS  
 SEAN D. PERROTTO  
 LICENSED PROFESSIONAL ENGINEER  
 LICENSE NO. 12001  
 STATE OF ARIZONA  
 2330 MCCULLOCH BLVD. N.  
 LAKE HAVASU CITY, AZ 86403  
 (928) 852-2116

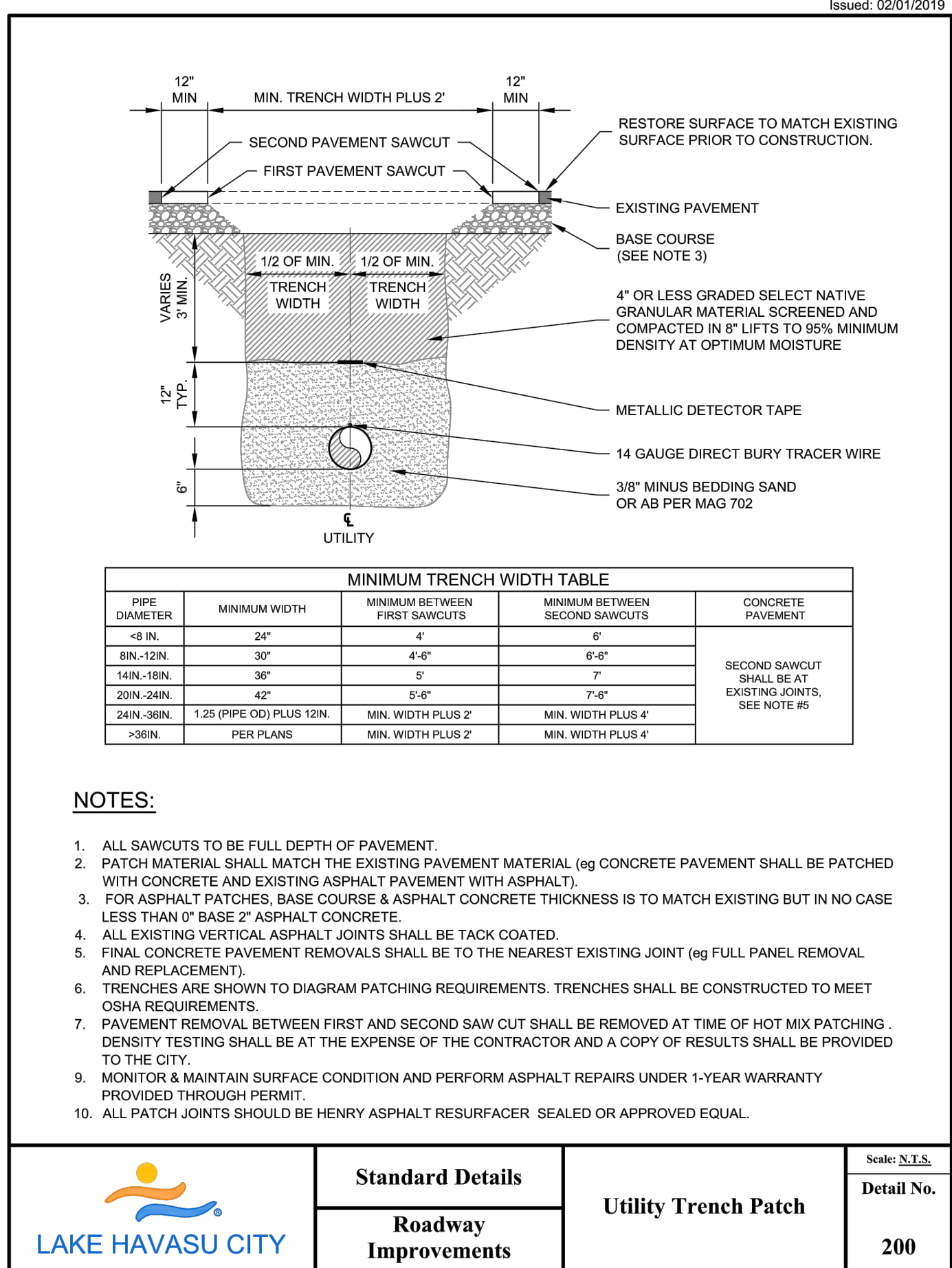
**PALO VERDE BLVD. S., INDUSTRIAL BLVD., & KIOWA AVE. PAVEMENT REHABILITATION PROJECT B24-PW-500396-108018**  
 PERL ARIZONA LLC  
 APN 106-24-098  
 (NOT A PART)



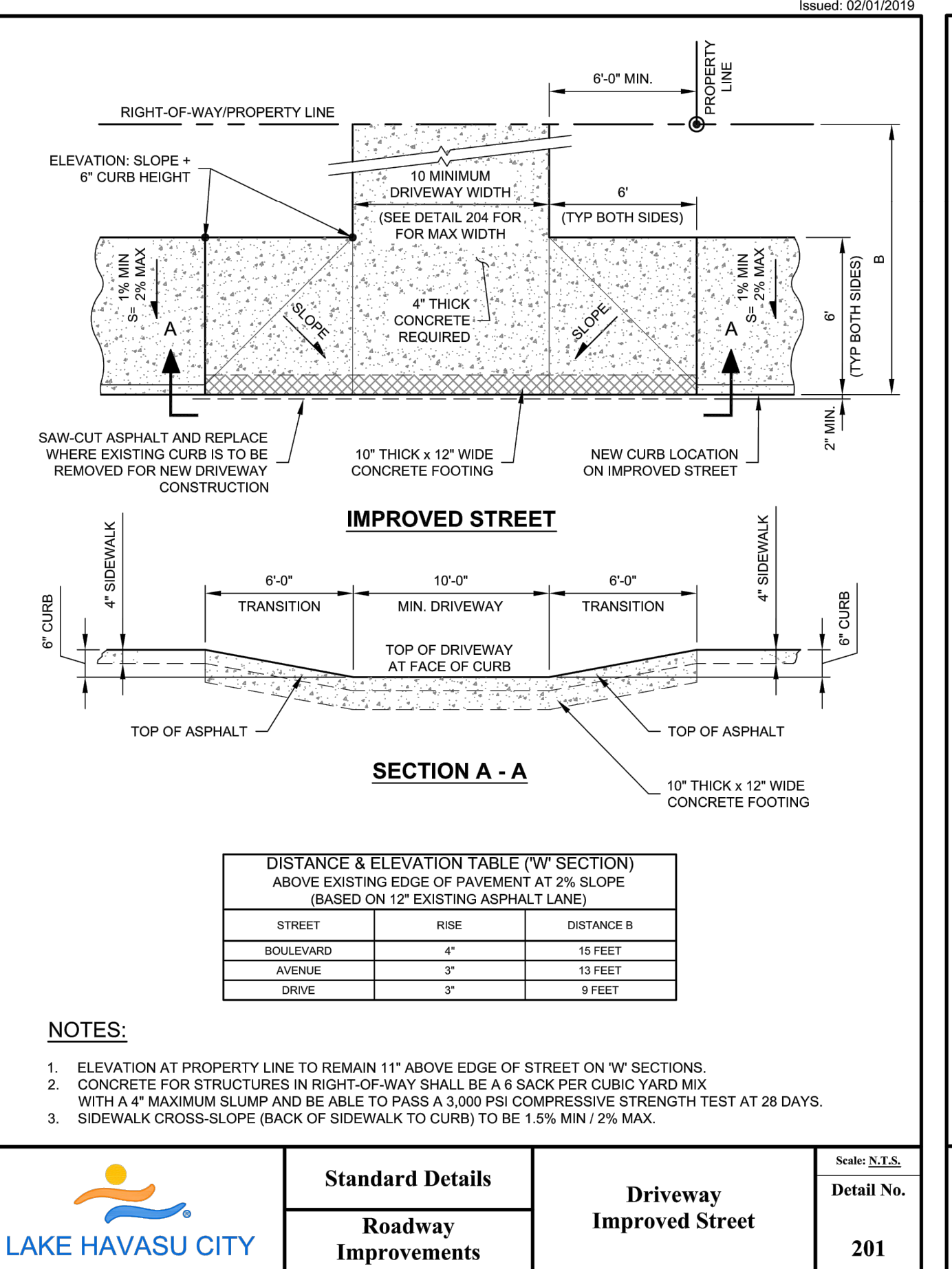
**TYPICAL STREET SECTIONS II**

DATE:	JULY 2023	DRAWN BY:	CCP
DWG SCALE:	N.T.S.	CHECKED BY:	EPJ/SBP
PROJECT NO.:		DATE:	22-086
APPROVED BY:		SUP:	

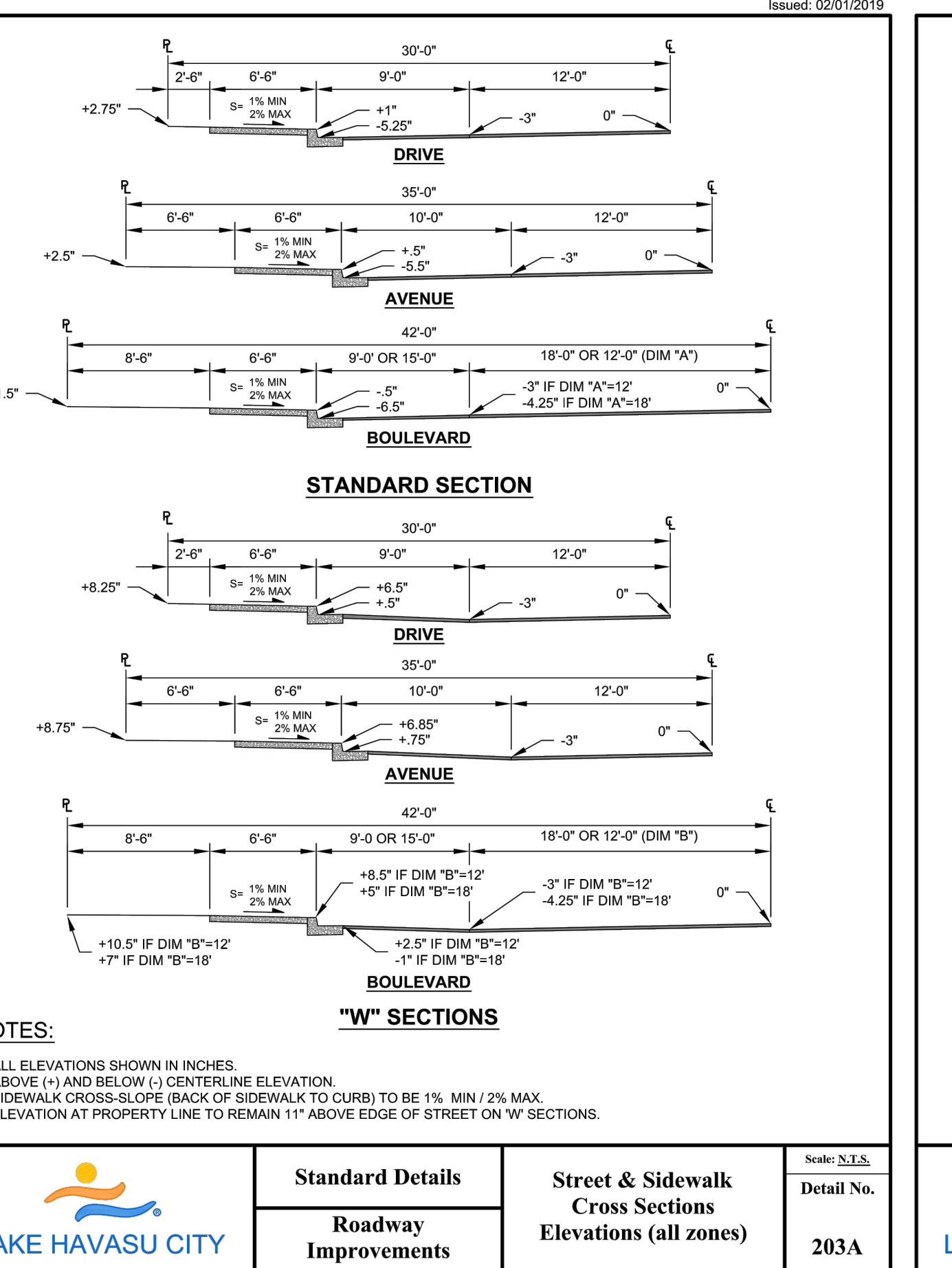
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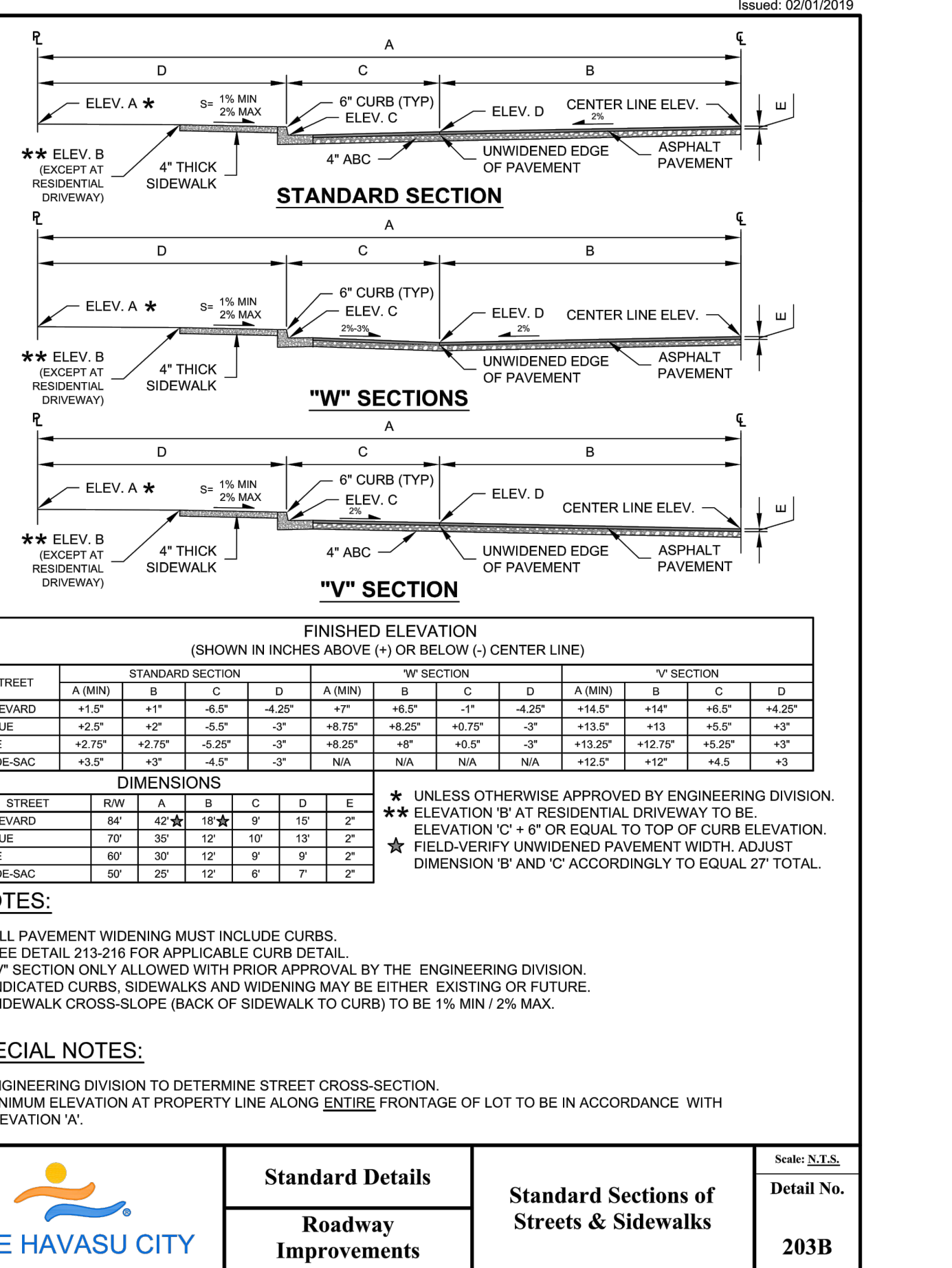
LAKE HAVASU CITY Standard Details Roadway Improvements Utility Trench Patch Detail No. 200



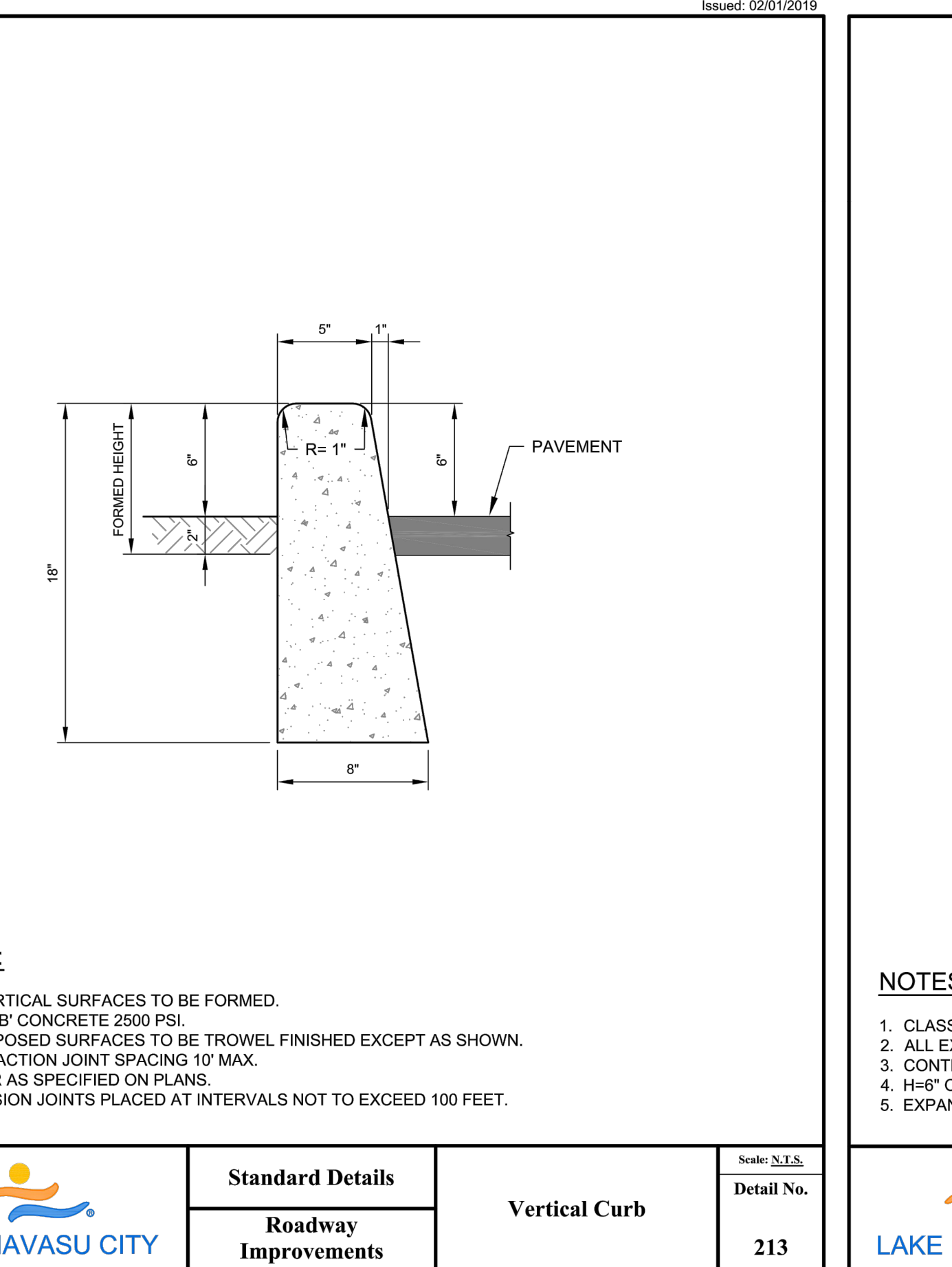
LAKE HAVASU CITY Standard Details Roadway Improvements Driveway Improved Street Detail No. 201



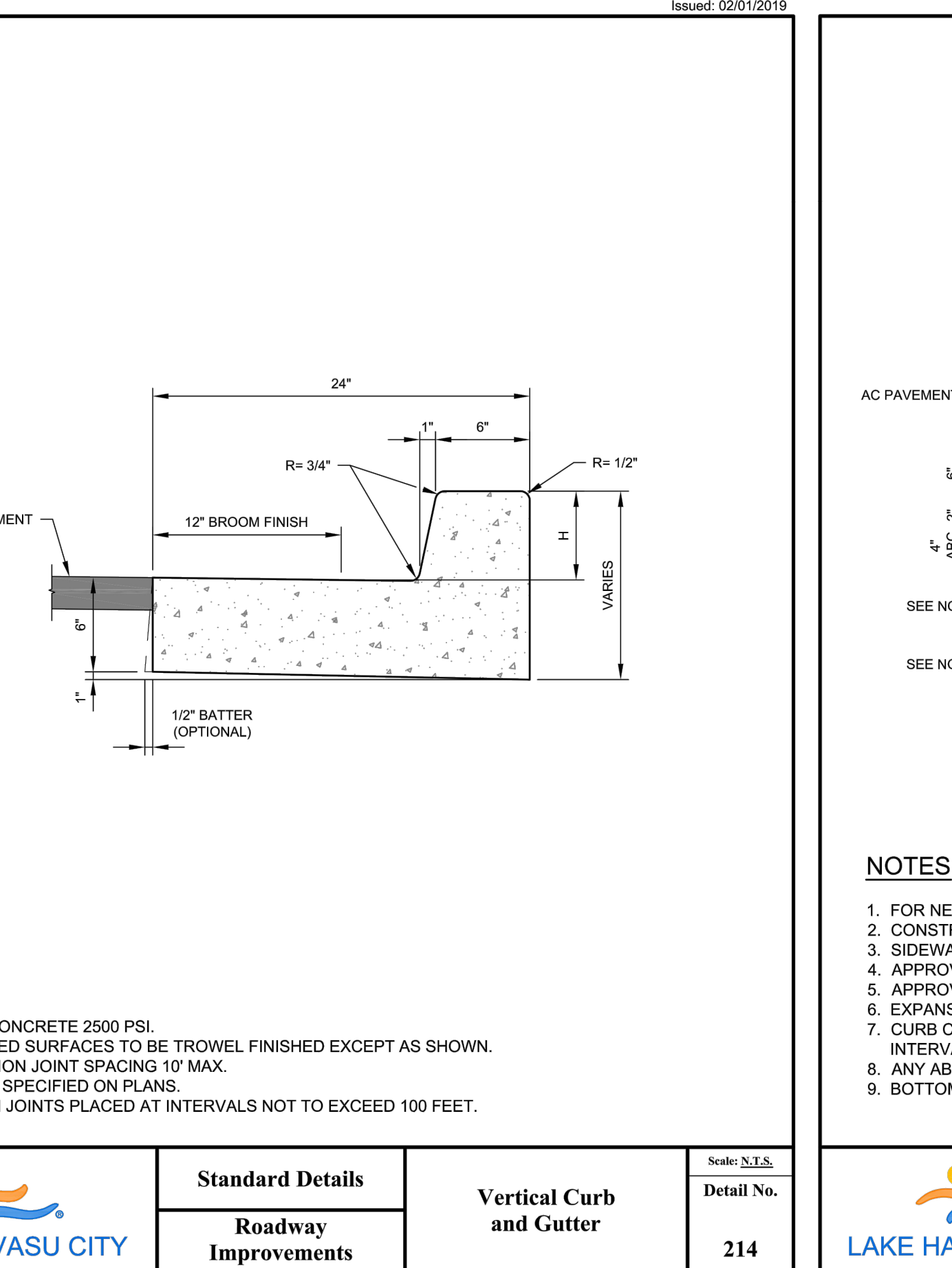
LAKE HAVASU CITY Standard Details Roadway Improvements Street & Sidewalk Cross Sections Elevations (all zones) Detail No. 203A



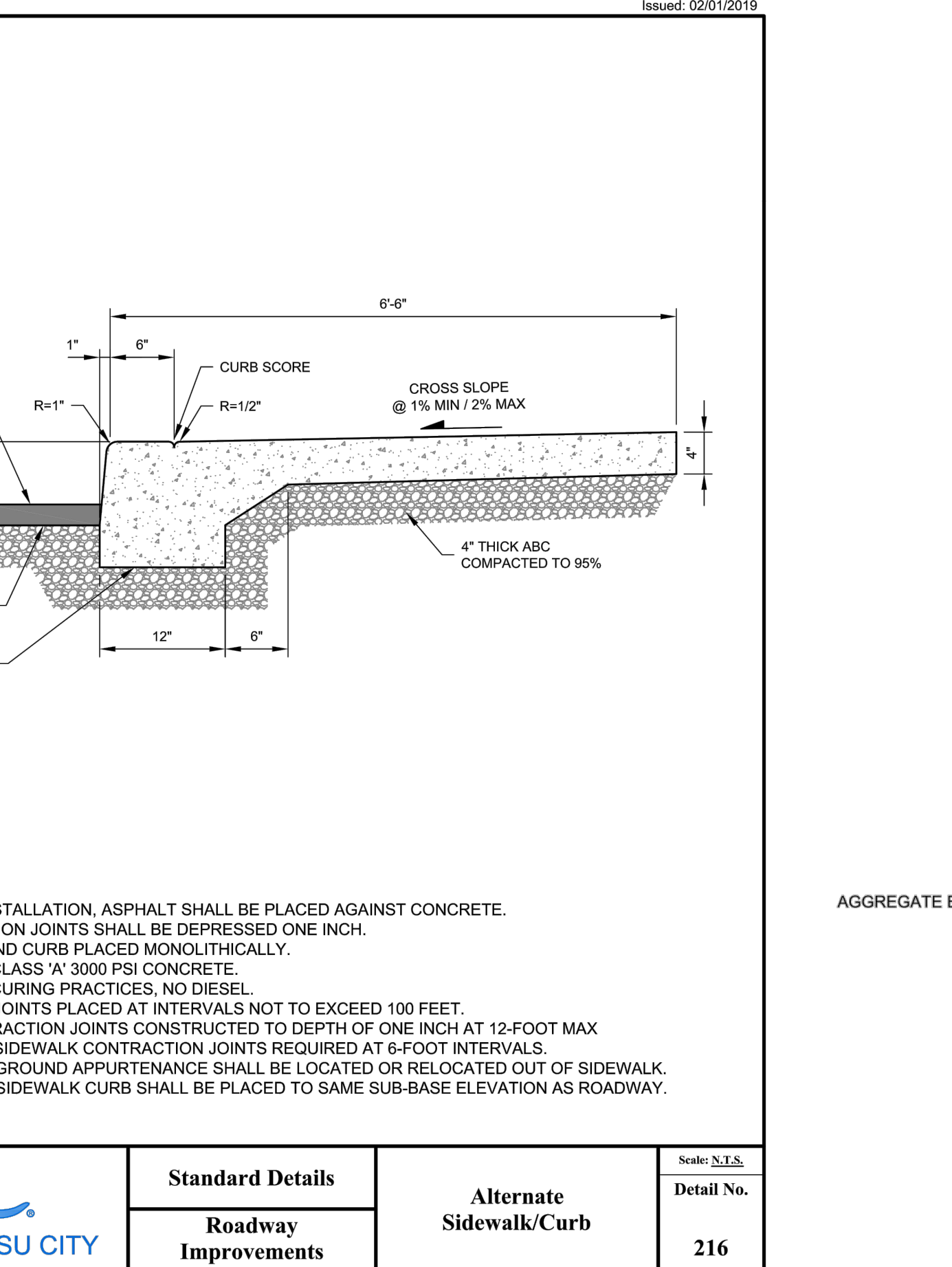
LAKE HAVASU CITY Standard Details Roadway Improvements Standard Sections of Streets & Sidewalks Detail No. 203B



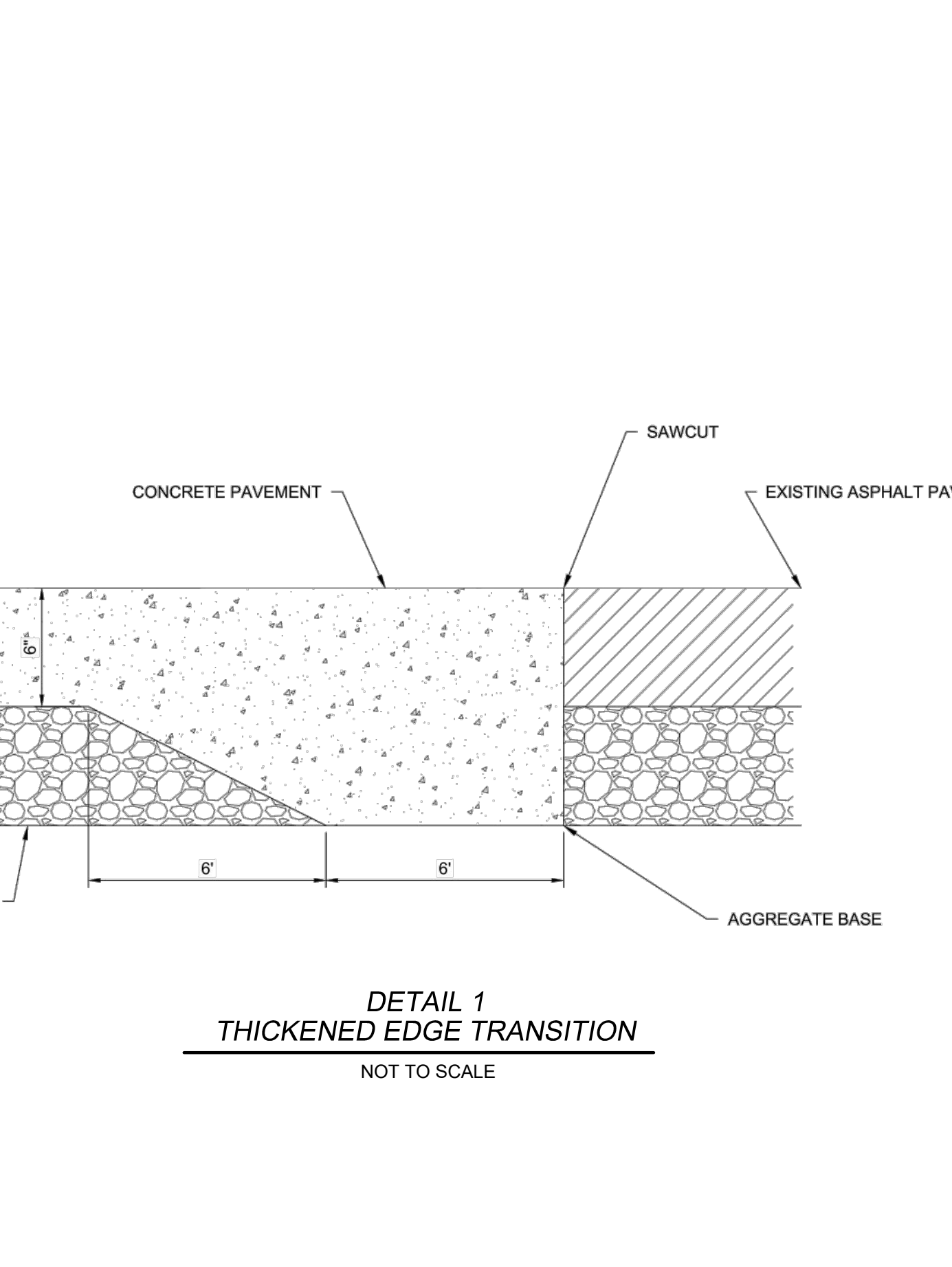
LAKE HAVASU CITY Standard Details Roadway Improvements Vertical Curb Detail No. 213



LAKE HAVASU CITY Standard Details Roadway Improvements Vertical Curb and Gutter Detail No. 214



LAKE HAVASU CITY Standard Details Roadway Improvements Alternate Sidewalk/Curb Detail No. 216



LAKE HAVASU CITY Standard Details Roadway Improvements Detail No. 216

**REVISION RECORD**

NO.	DATE	DESCRIPTION

**TRICO ENGINEERING, LLC**  
 PREPARED BY: SEAN D. FERRETTO  
 CHECKED BY: SCOTT BALE, AZ 85218  
 PROJECT NO: 23-086  
 DATE: JULY 2023  
 DRAWN BY: N.T.S.  
 DWG SCALE: N.T.S.  
 PROJECT NO: 23-086  
 APPROVED BY: SJD

**LAKE HAVASU CITY**  
 PALO VERDE BLVD. S., INDUSTRIAL BLVD., & KIOWA AVE. PAVEMENT REHABILITATION PROJECT B24-PW-500396-108018  
 LAKE HAVASU CITY  
 2330 MCCULLOUGH BLVD. N.  
 LAKE HAVASU CITY, AZ 86403  
 (928) 852-1116

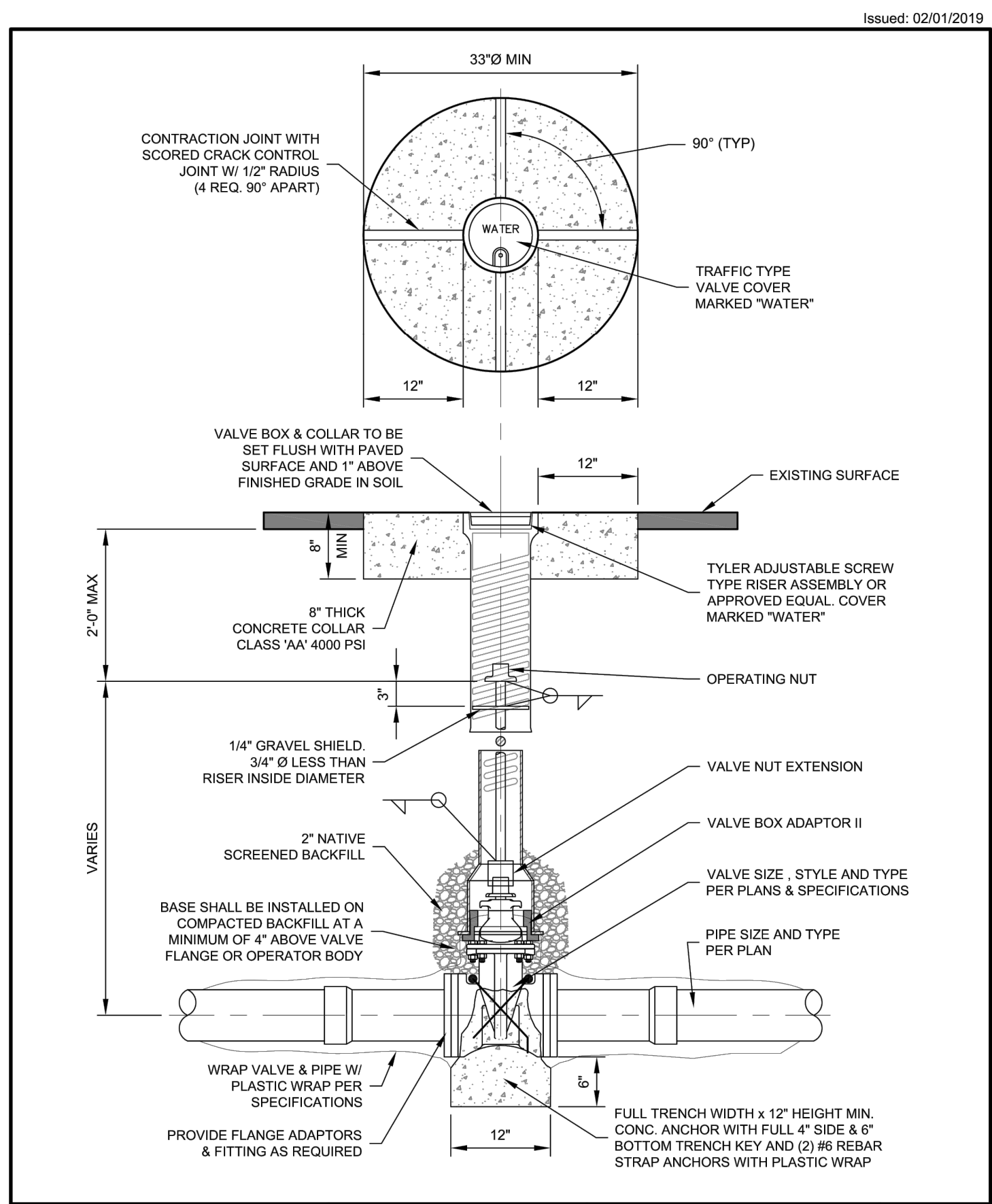
**GENERAL DETAILS I**

DATE: JULY 2023  
 DRAWN BY: N.T.S.  
 DWG SCALE: N.T.S.  
 PROJECT NO: 23-086  
 APPROVED BY: SJD

**C-14**  
 SHEET 14 OF 16

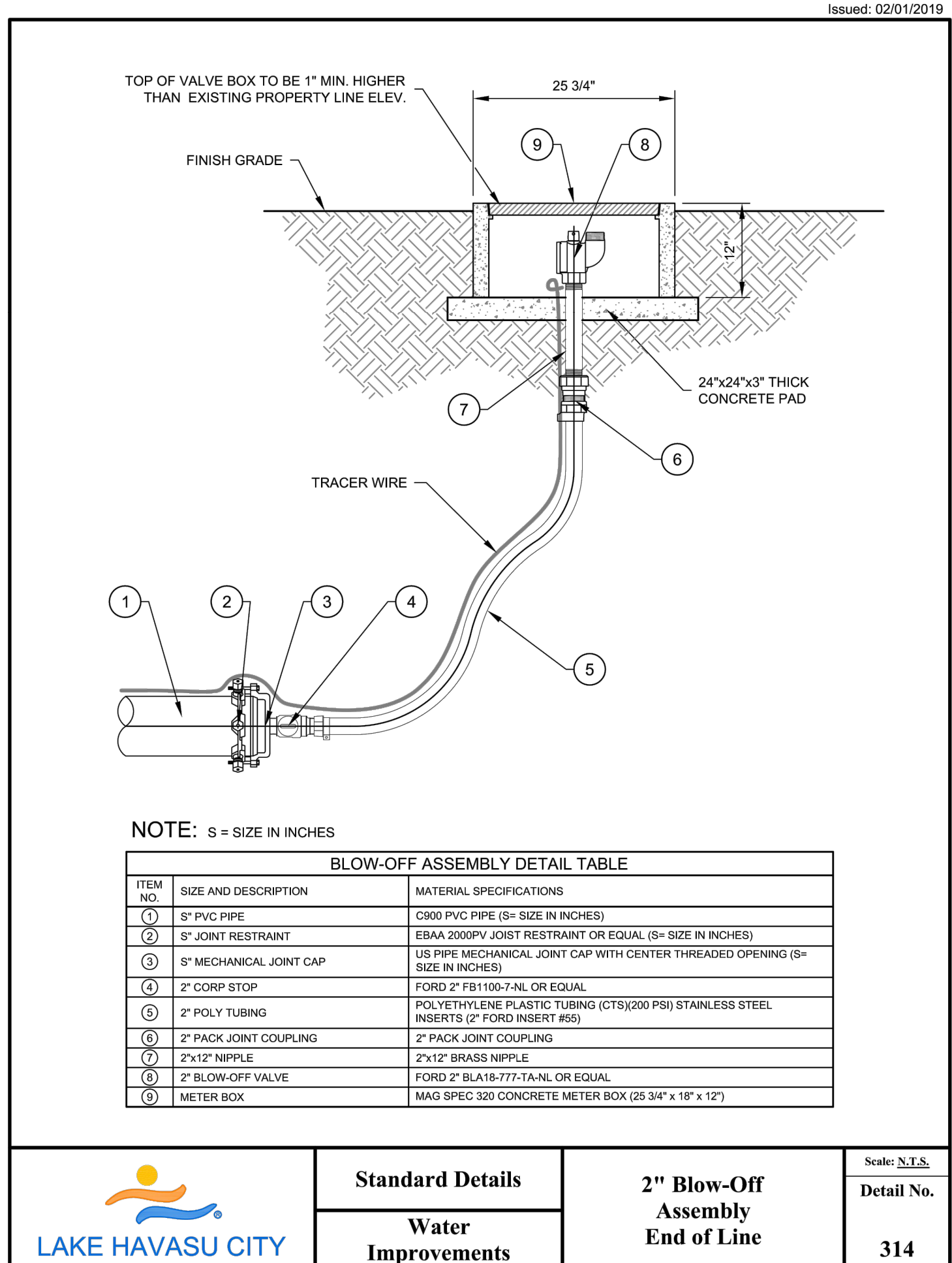
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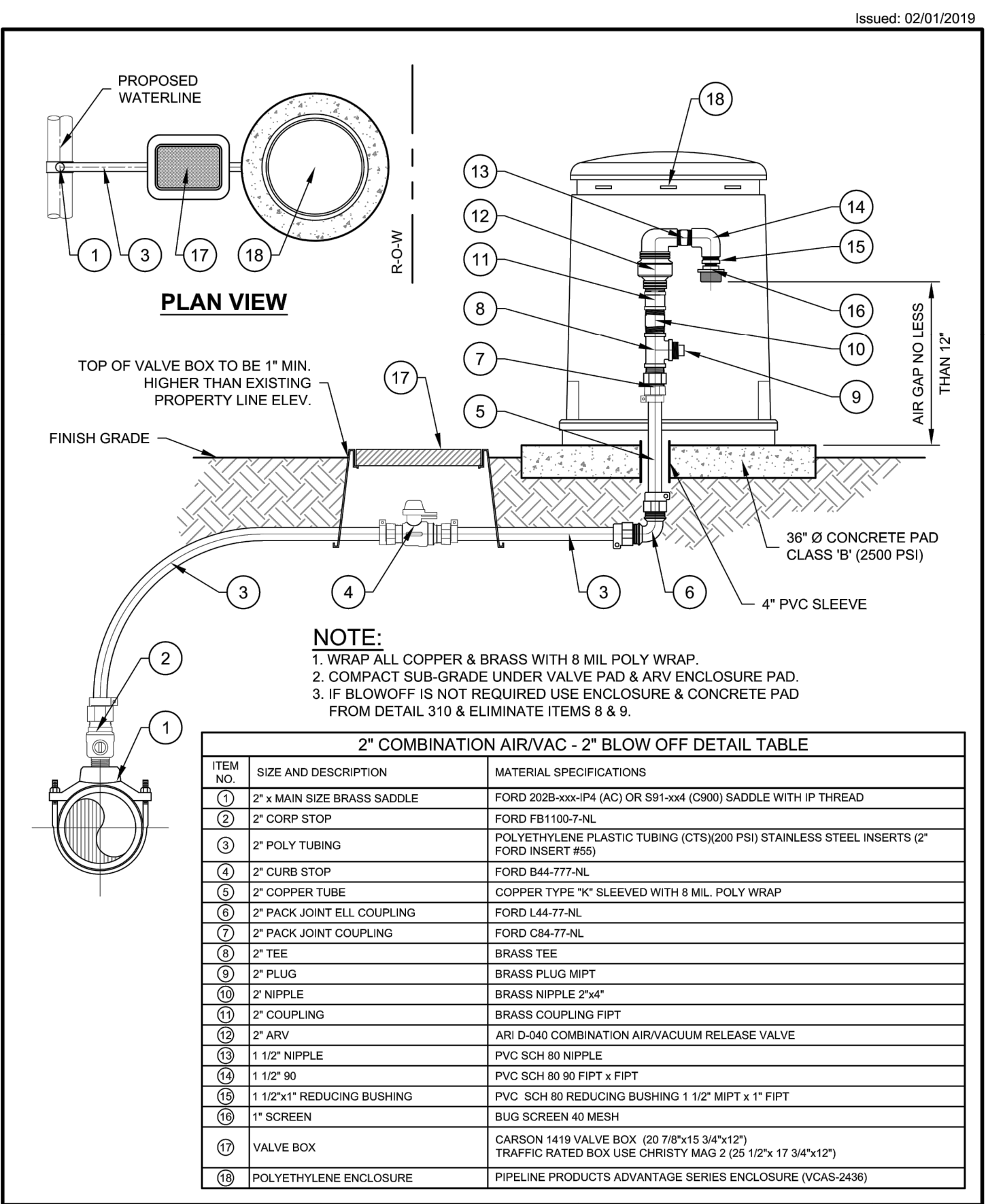
LAKE HAVASU CITY	Standard Details	Valve / Valve Riser	Scale: N.T.S.
	Water Improvements		Detail No. 300

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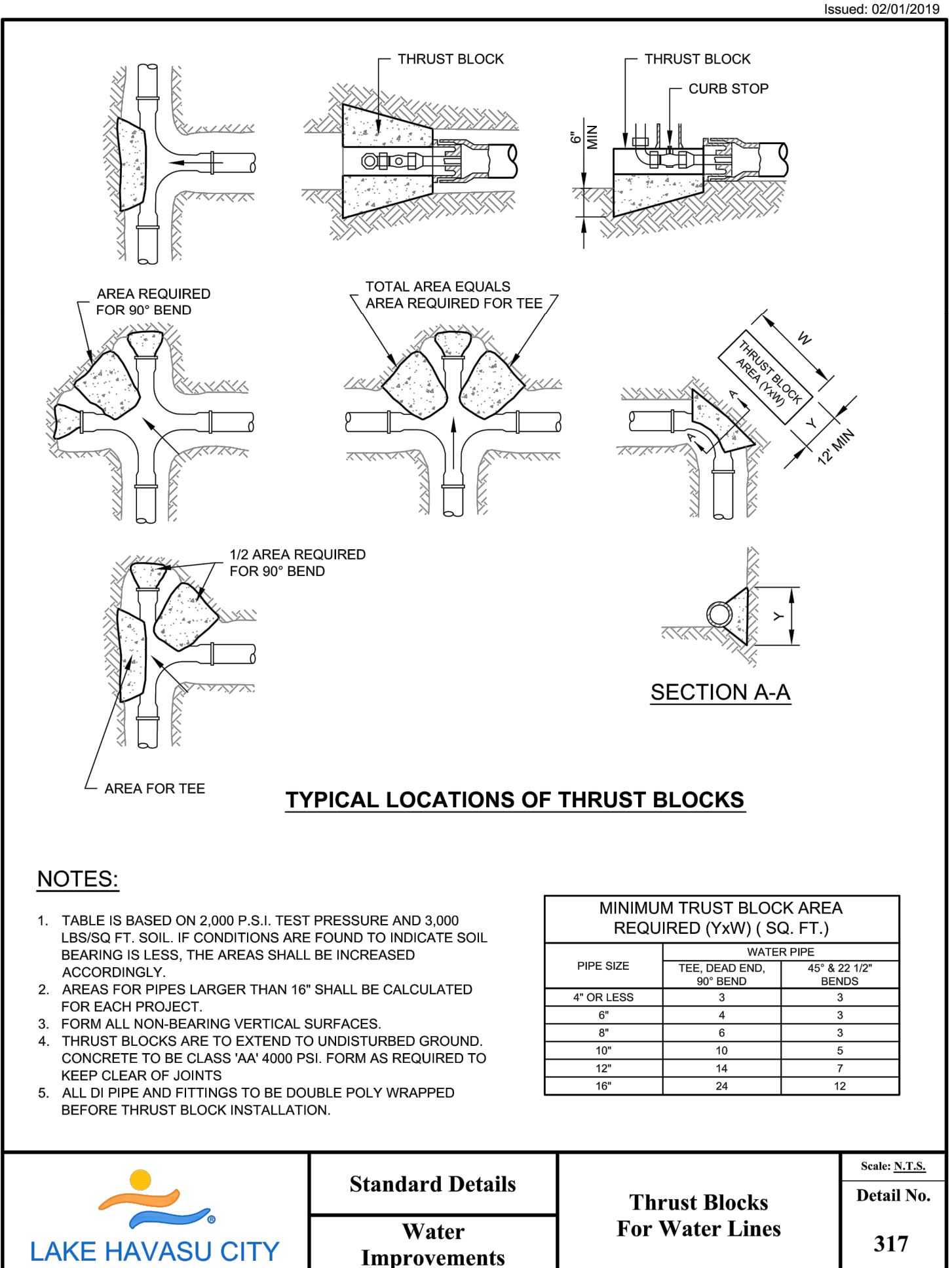
LAKE HAVASU CITY	Standard Details	2" Blow-Off Assembly End of Line	Scale: N.T.S.
	Water Improvements		Detail No. 314

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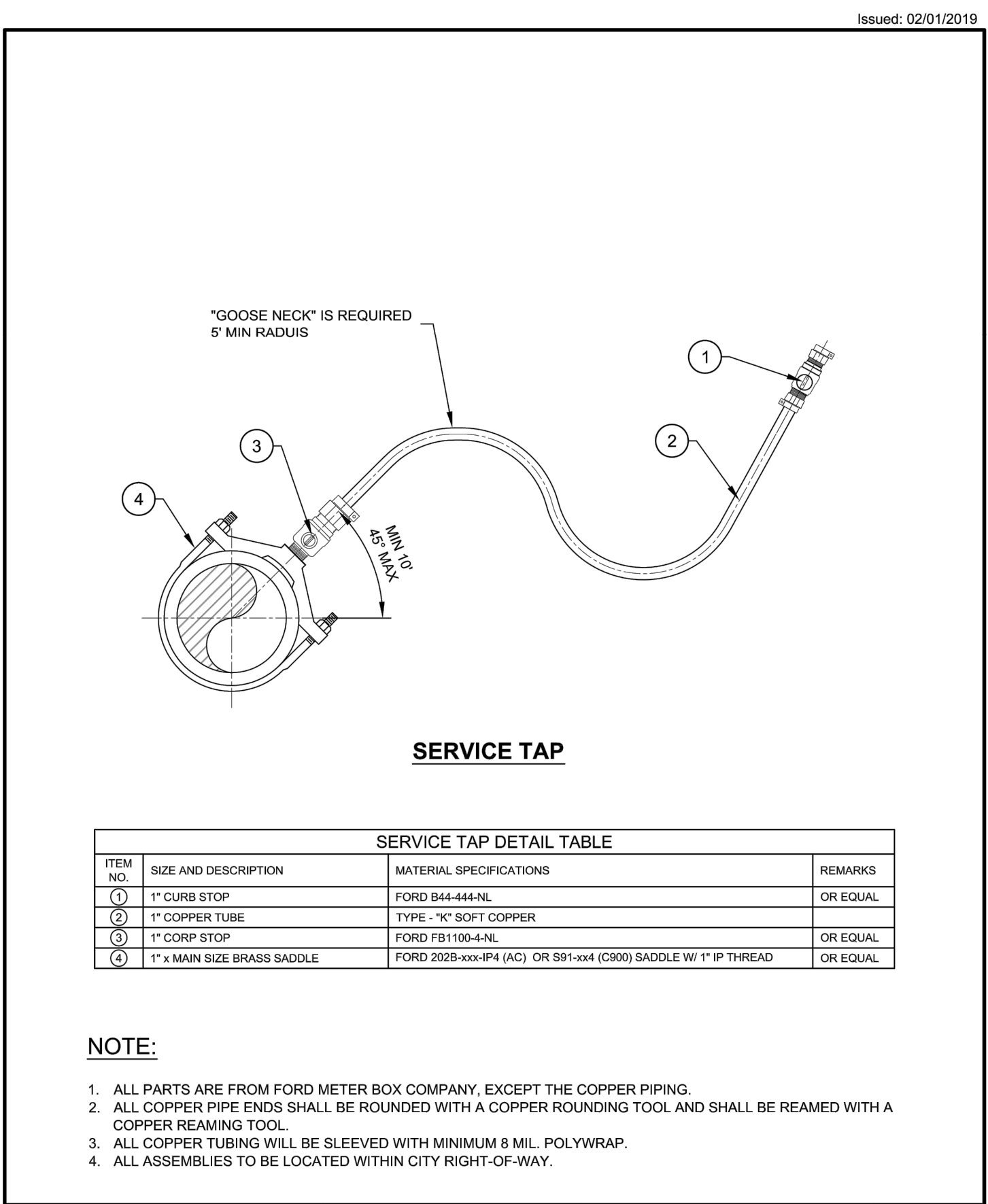
LAKE HAVASU CITY	Standard Details	2" Combination Air/Vacuum Valve & 2" Blow-Off	Scale: N.T.S.
	Water Improvements		Detail No. 311

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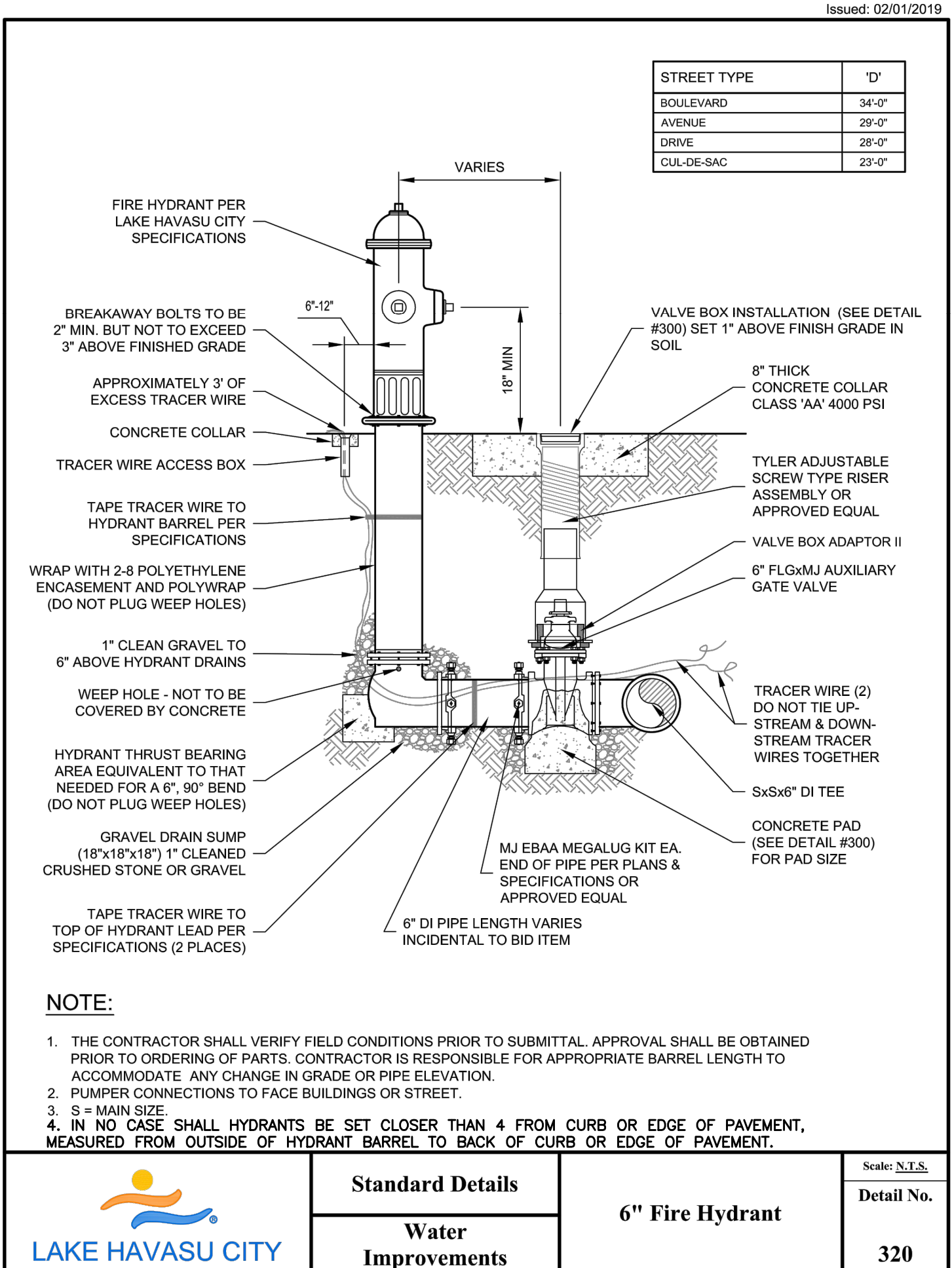
LAKE HAVASU CITY	Standard Details	Thrust Blocks For Water Lines	Scale: N.T.S.
	Water Improvements		Detail No. 317

A:\City Operations and Development\Engineering\Programs\Standards\Developing Public Works Standards\LHC Standard Details\LHC Series 300 Water\DWG\DETAIL 317.dwg



LAKE HAVASU CITY	Standard Details	1" Service Tap	Scale: N.T.S.
	Water Improvements		Detail No. 303

A:\City Operations and Development\Engineering\Programs\Standards\Developing Public Works Standards\LHC Standard Details\LHC Series 300 Water\DWG\DETAIL 303.dwg



LAKE HAVASU CITY	Standard Details	6" Fire Hydrant	Scale: N.T.S.
	Water Improvements		Detail No. 320

A:\City Operations and Development\Engineering\Programs\Standards\Developing Public Works Standards\LHC Standard Details\LHC Series 300 Water\DWG\DETAIL 320.dwg

REVISION RECORD	
NO	DESCRIPTION

**TRICO ENGINEERING, LLC**

PREPARED BY: SEAN D. FERROTTO  
 2330 MCCULLOCH BLVD. N.  
 LAKE HAVASU CITY, AZ 86403  
 (928) 852-1116

ISSUED: 02/01/2019

**PALO VERDE BLVD. S., INDUSTRIAL BLVD., & KIOWA AVE. PAVEMENT REHABILITATION PROJECT B24-PW-500396-108018**

LAKE HAVASU CITY  
 2330 MCCULLOCH BLVD. N.  
 LAKE HAVASU CITY, AZ 86403  
 (928) 852-1116

**GENERAL DETAILS II**

DATE: JULY 2023  
 DRAWN BY: CCP  
 CHECKED BY: N.T.S.  
 PROJECT NO: 22-086  
 APPROVED BY: SJP

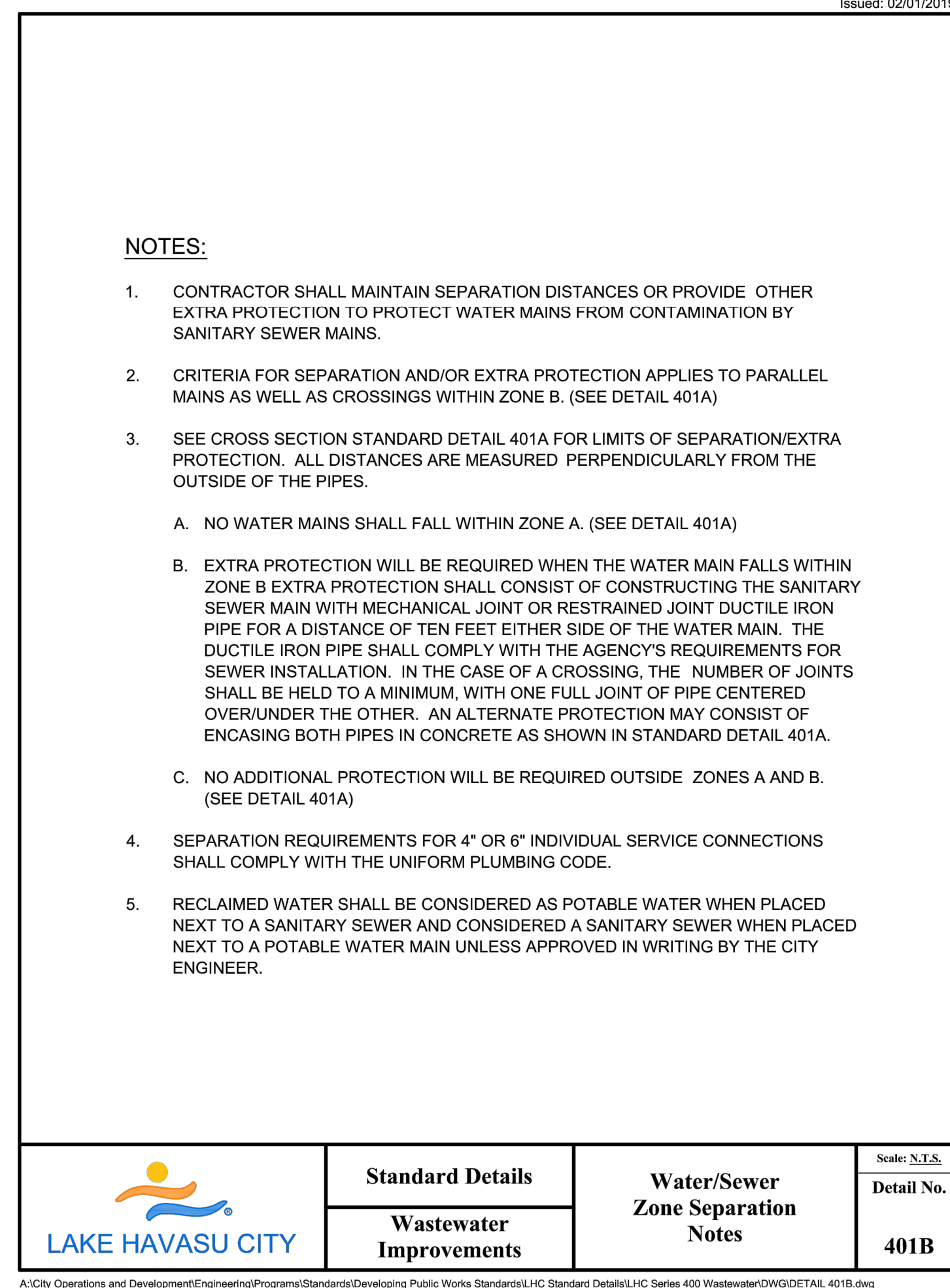
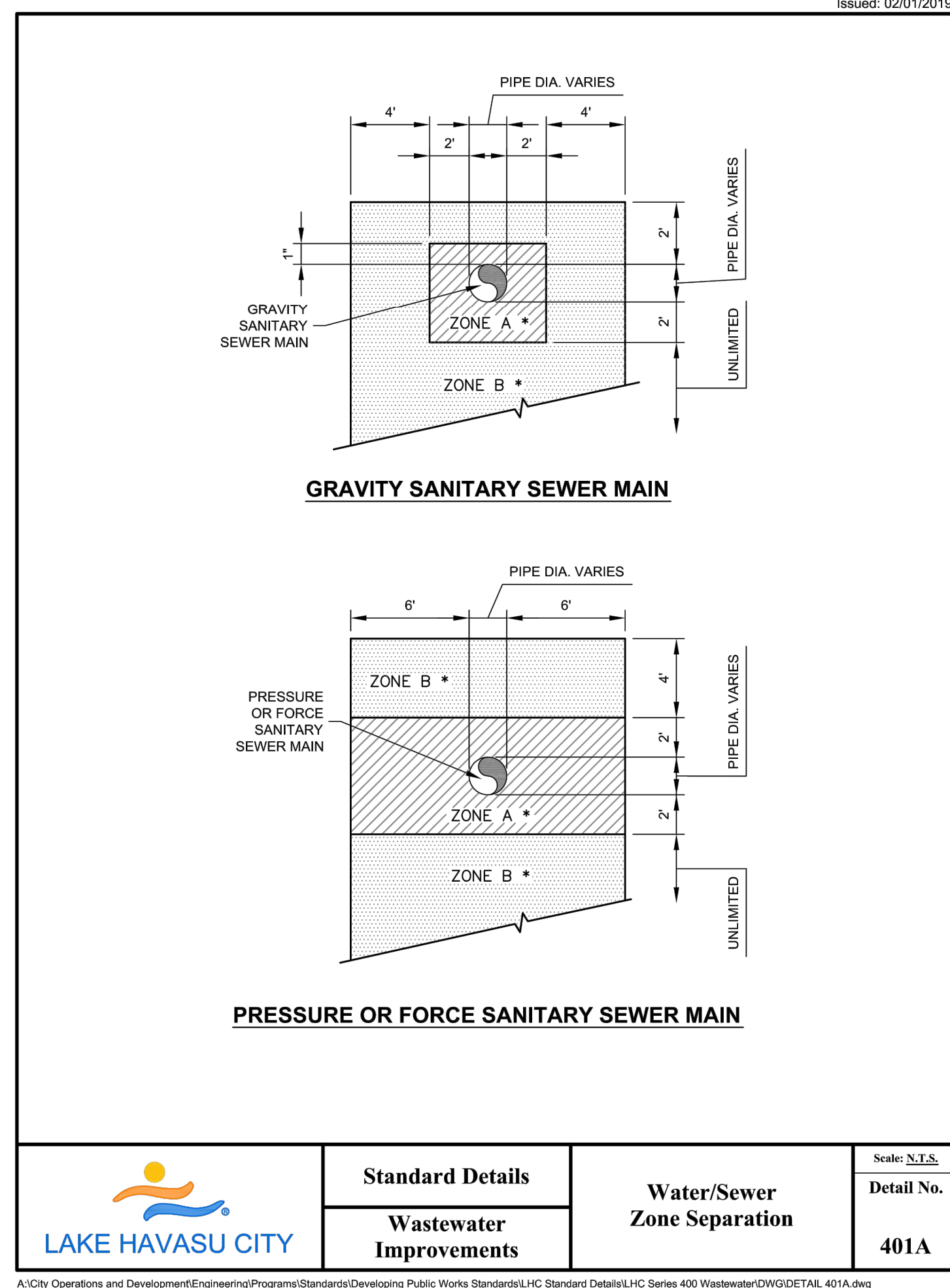
**C-15**

SHEET 15 OF 16



C:\Trico Engineering, LLC\Projects\B24-PW-500396-108018\General Details.dwg - 1/27/2023 12:28 PM

C:\Trico Engineering\LLC\Projects\2022\12-08-08-LLC\_Palo Verde South Reimbursement Revamp\12-08-08-LLC\_General Rehabilitation\12-08-08-LLC\_General Rehabilitation.dwg 12/08/2022 12:26 PM



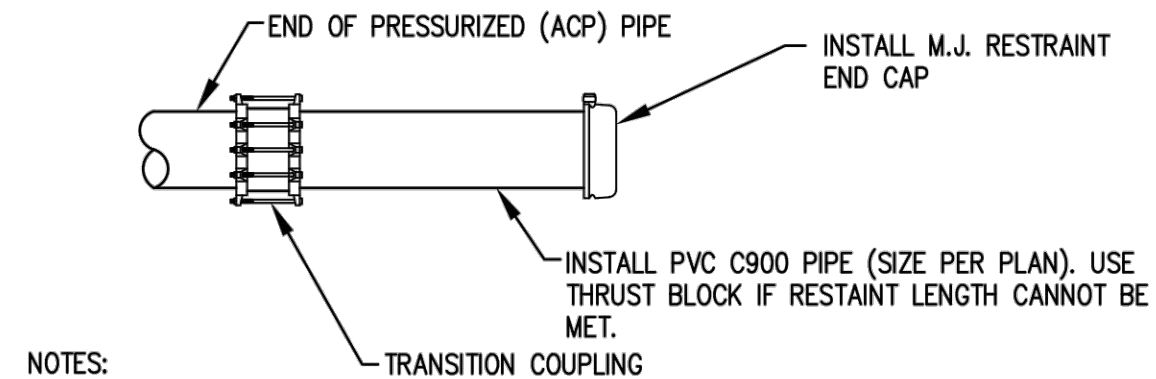
CRITERIA	
PIPE MATERIAL	PVC/D.I. (POLY-WRAPPED)
SOIL TYPE	GM
SAFETY FACTOR	1.5
TRENCH TYPE	5
DEPTH OF BURY	4 FT
TEST PRESSURE	200 PSI

BEND ANGLE (DEGREES)	8-INCH PVC PIPE (FEET)		12-INCH PVC PIPE (FEET)	
	UPPER	LOWER	UPPER	LOWER
22.5	21	4	21	5
45	31	7	45	10

BEND ANGLE (DEGREES)	8-INCH PVC PIPE (FEET)		12-INCH PVC PIPE (FEET)	
	UPPER	LOWER	UPPER	LOWER
11.25	3		5	
22.5	5		10	
45	10		200	
90	24		48	
TEE	(8" NOMINAL) 1		(18" NOMINAL) 1	
DEAD-END	73		104	

NOTE: CONTRACTOR SHALL REFER TO SPECIFICATION 02550 FOR RESTRAINT TYPE.

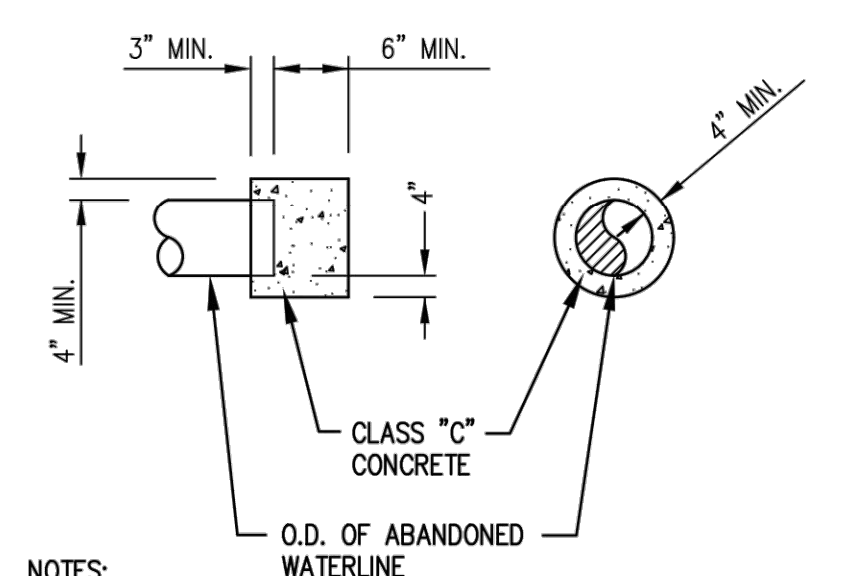
**DETAIL 2  
RESTRAINT JOINT TABLE**  
NOT TO SCALE



**NOTES:**

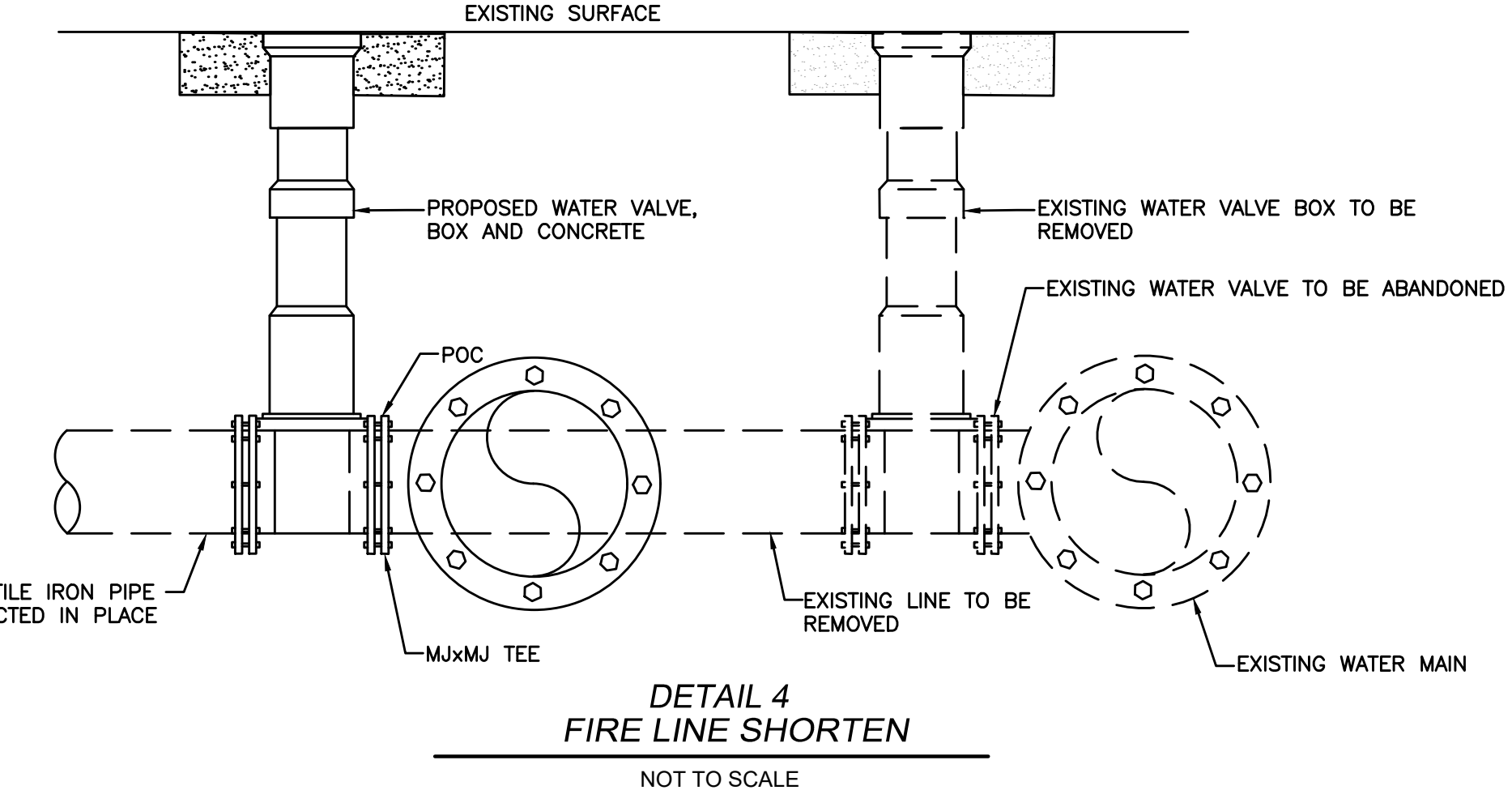
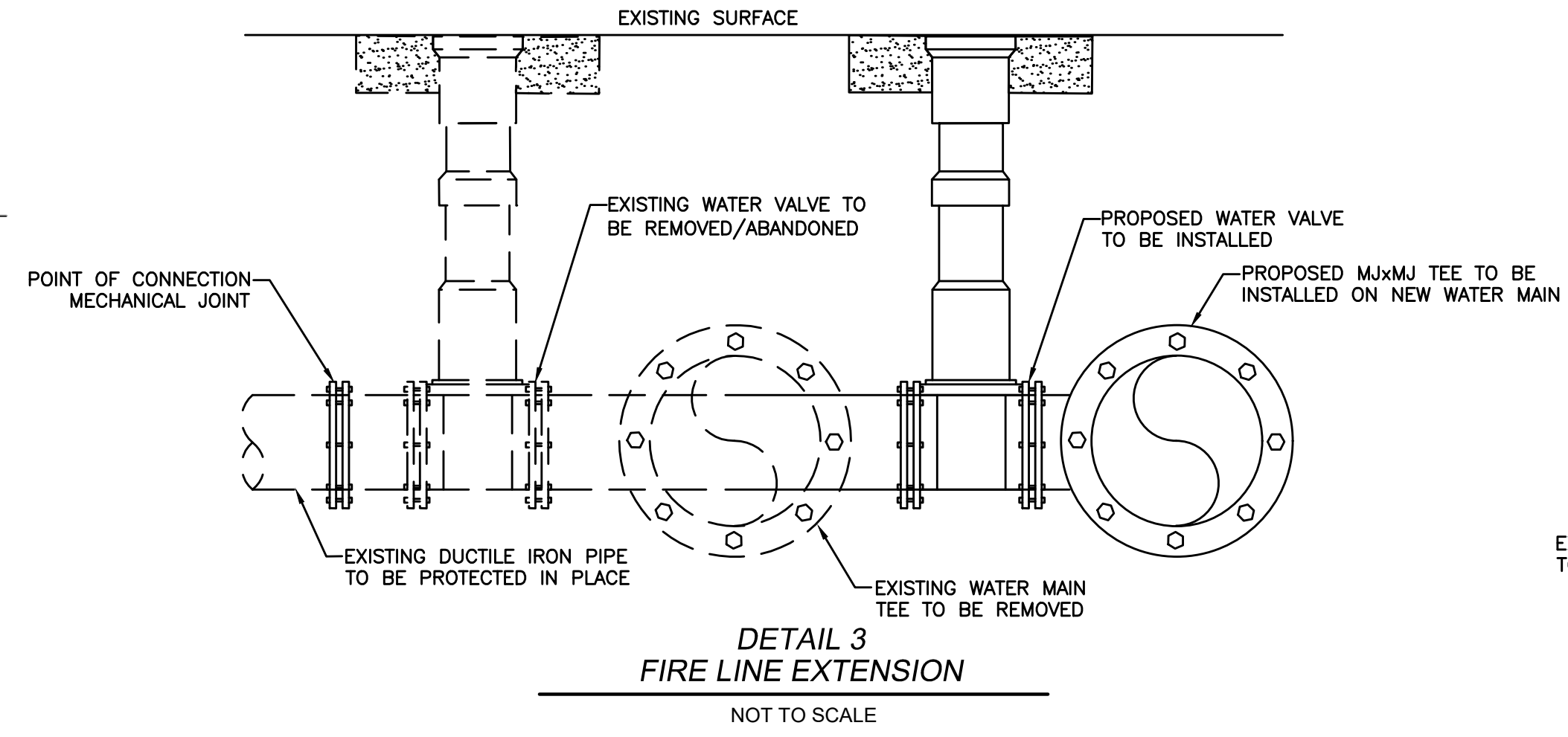
- ALL WORK INCLUDING MATERIAL, EXCAVATION, CUTTING & PLUGGING OF EXISTING WATERLINE(S), COMPACTION, AND PAVEMENT REMOVAL AND REPLACEMENT SHALL BE INCIDENTAL TO THE WATERLINE INSTALLATION BID ITEM.

**PRESSURIZED WATERLINE (P)**

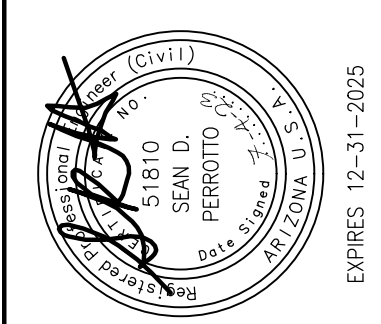


**NOTES:**

- ALL WORK INCLUDING MATERIAL, EXCAVATION, CUTTING & PLUGGING OF EXISTING WATERLINE(S), COMPACTION, AND PAVEMENT REMOVAL AND REPLACEMENT SHALL BE INCIDENTAL TO THE WATERLINE INSTALLATION BID ITEM.



REVISION RECORD	
NO	DATE



**TRICO**  
ENGINEERING, LLC

PRESENTS  
 2330 MCCULLOCH BLVD. N.  
 LAKE HAVASU CITY, AZ 86403  
 (928) 852-1106  
 1100 N. AVENUE  
 SCOTTSDALE, AZ 85257

**PALO VERDE BLVD. S.,  
 INDUSTRIAL BLVD., & KIOWA AVE.  
 PAVEMENT REHABILITATION  
 PROJECT B24-PW-500396-108018**

LAKE HAVASU CITY  
 2330 MCCULLOCH BLVD. N.  
 LAKE HAVASU CITY, AZ 86403  
 (928) 852-1106



<b>GENERAL DETAILS III</b>	CCP
DATE: JULY 2022	DRAWN BY: EJP/SBP
DWG SCALE: N.T.S.	CHECKED BY: N.T.S.
PROJECT NO:	22-086
APPROVED BY:	SJP

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