



CONSTRUCTION PLANS FOR:

OCEANO COMMUNITY SERVICES DISTRICT

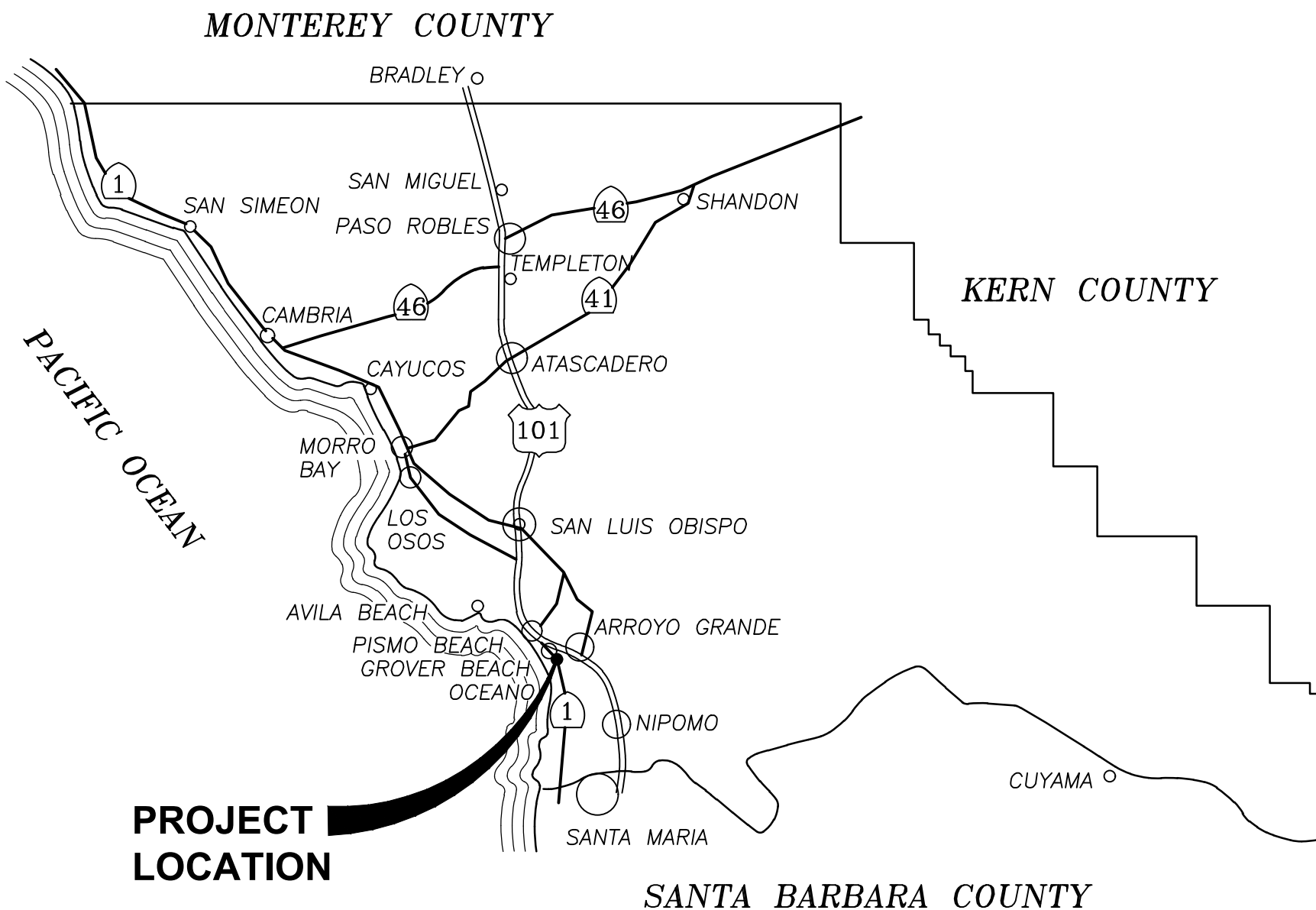
OCEANO, CALIFORNIA

CIPs A-3, A-4, AND A-7 SEWER SYSTEM UPGRADES PROJECT

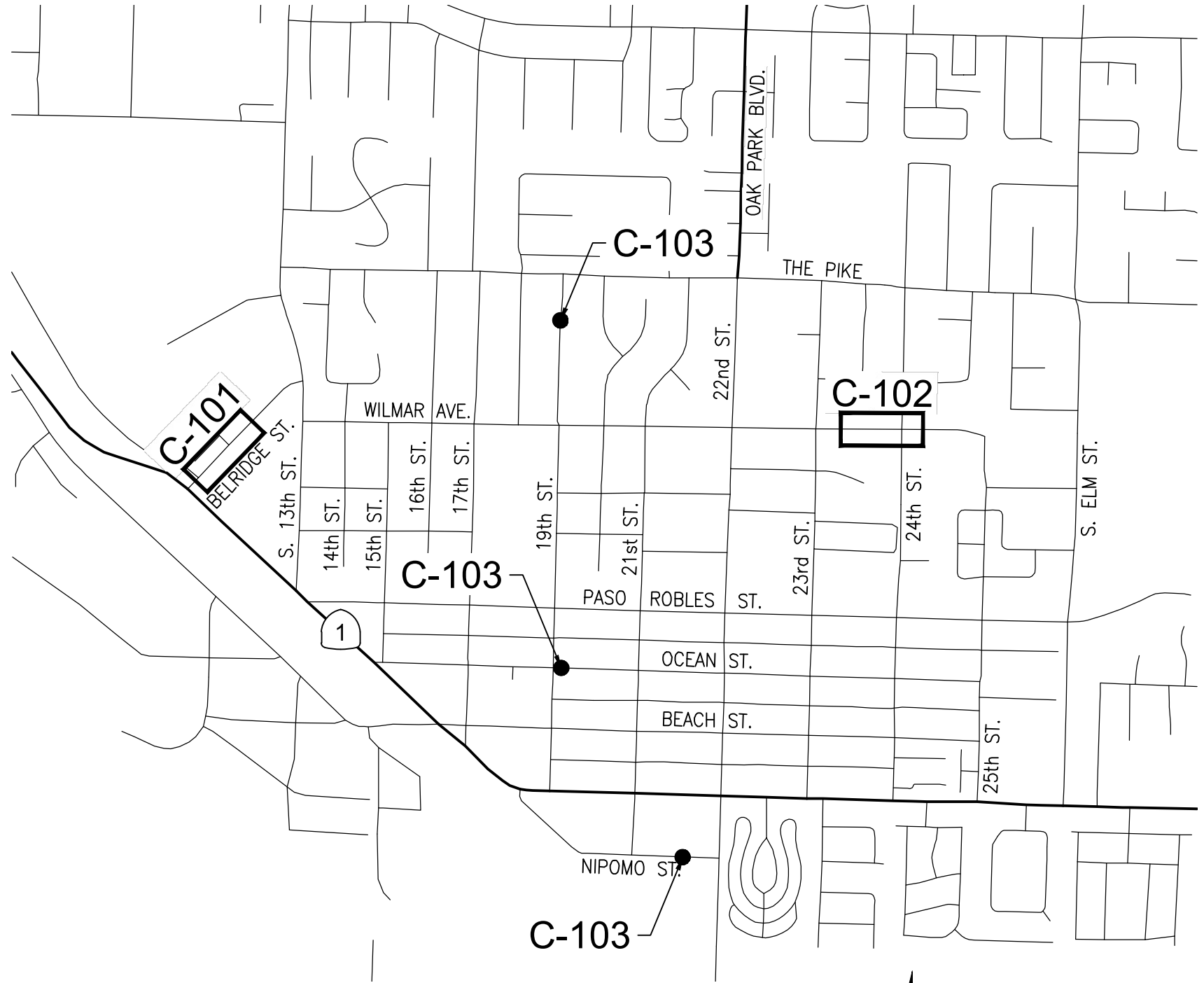
AUGUST 2026

SHEET INDEX

SHEET	DRAWING	DESCRIPTION
1	G-001	TITLE SHEET, VICINITY MAP, LOCATION MAP, AND SHEET INDEX
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VICINITY MAP
NOT TO SCALE



LOCATION MAP
NOT TO SCALE

CLIENT



**OCEANO
COMMUNITY
SERVICES
DISTRICT**

1655 FRONT STREET
OCEANO, CA 93445
TEL: (805) 481-6730
FAX: (805) 481-6836

PROJECT

**CIPs A-3, A-4, AND A-7
SEWER SYSTEM
UPGRADES PROJECT**

SHEET TITLE

**TITLE SHEET, VICINITY
MAP, LOCATION MAP,
AND SHEET INDEX**



354 PACIFIC ST
SAN LUIS OBISPO, CA 93401 (805) 329-4773

ENGINEER OF RECORD

JOSEPH J. REICHMUTH, PE
NO. C63124 EXP 6/30/2028



DATE
AUGUST 2026

SHEET
G-001
1 OF 7

8/4/2026 DWG: K:\Oceanic CSD\A2024-0113 Sanitary Sewer Project\000 Engineering\001 CAD\Plans\G-002.dwg Plotted By: SCATTAMACH

GENERAL NOTES

1.

STATIONING AND DISTANCES SHOWN ON THE DRAWINGS ARE BASED ON HORIZONTAL MEASUREMENTS PROJECTED FROM THE PIPE CENTERLINE UNLESS NOTED OTHERWISE.
2.

THE CONTRACTOR SHALL HAVE COPIES OF THE PLANS AND SPECIFICATIONS FOR THIS PROJECT ON-SITE DURING CONSTRUCTION AND SHALL BE FAMILIAR WITH ALL APPLICABLE STANDARDS AND SPECIFICATIONS.
3.

VERIFY DIMENSIONS AND CONDITIONS AT THE SITE BEFORE STARTING WORK. ANY CONFLICTS BETWEEN DETAILS OR DIMENSIONS ON THE DRAWINGS SHALL BE REPORTED PROMPTLY TO THE OWNER'S REPRESENTATIVE WHO WILL DETERMINE THE INTENT OF THE DRAWINGS.
4.

TAKE PRECAUTIONARY MEASURES TO PROTECT UTILITIES AND STRUCTURES SHOWN AS WELL AS ANY AND ALL OTHERS NOT OF RECORD OR NOT SHOWN ON THESE PLANS. ALL SUCH IMPROVEMENTS OR STRUCTURES DAMAGED BY THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED OR RECONSTRUCTED TO ORIGINAL DESIGN CONDITION AND/OR THE APPLICABLE REQUIREMENTS OF THE AFFECT UTILITY AT THE CONTRACTOR'S EXPENSE. APPROVAL BY DISTRICT SHALL BE REQUIRED.
5.

UPON LEARNING OF THE EXISTENCE AND LOCATIONS OF ANY UNDERGROUND FACILITIES NOT SHOWN OR SHOWN INACCURATELY ON THESE PLANS OR NOT PROPERLY MARKED BY THE UTILITY OWNER, IMMEDIATELY NOTIFY THE DISTRICT AND THE OWNER'S REPRESENTATIVE BY TELEPHONE AND IN WRITING.
6.

UTILITY LOCATIONS SHOWN ON THESE PLANS ARE APPROXIMATE AND FOR GENERAL INFORMATION ONLY UNLESS OTHERWISE NOTED. PERFORM INDEPENDENT INVESTIGATIONS (POTHOLE)S TO DETERMINE LOCATIONS AND SIZES OF EXISTING UTILITIES. NOTIFY OWNER'S REPRESENTATIVE BY TELEPHONE AND IN WRITING OF ANY DISCREPANCIES.
7.

COORDINATE UNDERGROUND UTILITY MARKING WITH THE LOCAL UNDERGROUND SERVICE ALERT JURISDICTION (CALL 811) PRIOR TO CONSTRUCTION.
8.

USE EXTREME CAUTION WHEN WORKING NEAR OVERHEAD OR UNDERGROUND POWER, GAS, OR OTHER UTILITIES SO AS TO PROTECT ALL PERSONNEL AND EQUIPMENT. PROTECT ALL OVERHEAD UTILITY LINES, WHETHER SHOWN OR NOT SHOWN ON THESE PLANS, FROM DAMAGE. NOTIFY UTILITY COMPANIES PRIOR TO ANY WORK IN OVERHEAD LOCATIONS. CONTRACTOR SHALL BE RESPONSIBLE FOR COST INCURRED.
9.

PRESERVE ALL SURVEY MARKERS AND MONUMENTATION. THOSE REQUIRING REMOVAL SHALL BE RE-ESTABLISHED IN ACCORDANCE WITH THE LOCAL GOVERNING AUTHORITY.
10.

LIMIT CONSTRUCTION ACTIVITIES TO THE RIGHT-OF-WAY, EASEMENTS, AND DESIGNATED AREAS SHOWN ON THE DRAWINGS.
11.

COMPACTION OF BACKFILL MATERIALS SHALL BE BY MECHANICAL EQUIPMENT IN ACCORDANCE WITH SPECIFICATION SECTION 312316. NO FLOODING OR JETTING WILL BE ALLOWED.
12.

AT THE CLOSE OF EACH WORKING SHIFT, WHERE A NEXT SHIFT WILL NOT IMMEDIATELY FOLLOW, CONSTRUCT PIPE END CAPS AND TRENCH RAMPS AT THE END OF THE EXCAVATION. PREVENT UNAUTHORIZED ENTRY INTO THE OPEN PIPE AND TRENCH.
13.

ALL SPECIFICATIONS, DRAWINGS, AND DETAILS INCLUDED IN THE CONTRACT DOCUMENTS SHALL FULLY APPLY TO THE WORK WHETHER SPECIFICALLY REFERENCED OR NOT.
14.

INSTALL SAFETY FENCING PER SPECIFICATION SECTION 015526.
15.

GROUND WATER PUMPED FROM EXCAVATION MAY BE DISCHARGED IN ACCORDANCE WITH APPLICABLE PERMITS AND REGULATIONS. GROUND WATER SHALL NOT BE DISCHARGED TO THE STREET OR SURROUNDING AREA WITHOUT A PERMIT. NO DISCHARGE TO SANITARY SEWERS WILL BE ALLOWED UNLESS PRIOR PERMISSION IS GRANTED BY THE DISTRICT.
16.

VIDEO RECORD AND DOCUMENT THE PRE-EXISTING CONDITIONS OF PROPERTIES ADJACENT TO THE PROJECT, AND SUBMIT THE VIDEO TO THE DISTRICT PRIOR TO THE START OF CONSTRUCTION. PROTECT ADJACENT PROPERTIES DURING WORK AND REPAIR DAMAGE TO LANDSCAPING, PAVING, IRRIGATION, STRUCTURES, ETC., CAUSED BY THE WORK.
17.

MAINTAIN THE WORK AREA IN A NEAT, CLEAN, AND SANITARY CONDITION AT ALL TIMES AND TO THE SATISFACTION OF THE OWNER, OWNER'S REPRESENTATIVE, AND AGENCY WITH LOCAL JURISDICTION. STREETS SHALL BE KEPT CLEAN OF DEBRIS, WITH DUST AND OTHER NUISANCES BEING CONTROLLED AT ALL TIMES. NO DRIVEWAYS TO BE BLOCKED.
18.

MAINTAIN A COMPLETE AND ACCURATE RECORD OF ALL CHANGES IN CONSTRUCTION FROM THAT SHOWN IN THESE PLANS AND SPECIFICATIONS FOR THE PURPOSE OF PROVIDING A BASIS FOR RECORD DRAWINGS. THE CONTRACTOR SHALL NOTE DEVIATIONS FROM THE PLANS ON A SET OF PLANS SPECIFICALLY SET ASIDE FOR THIS PURPOSE. ANY CHANGES SHALL BE MADE ON THE ORIGINALS OF THE PLANS. NO CHANGES FROM THAT SHOWN ON THESE PLANS AND SPECIFICATIONS SHALL BE MADE WITHOUT PRIOR WRITTEN APPROVAL OF THE OWNER'S REPRESENTATIVE.
19.

THE CONTRACTOR SHALL PROVIDE TRAFFIC CONTROL AND A TRAFFIC CONTROL PLAN. ALL LOCAL EMERGENCY SERVICES AND IMPACTED RESIDENTS SHALL BE NOTIFIED OF ANY DETOURS A MINIMUM OF 72 HOURS IN ADVANCE AND IN ACCORDANCE WITH THE ENCROACHMENT PERMIT. NO ROAD CLOSURES ARE PERMITTED.

SEWER NOTES

1.

THE DISTRICT SHALL BE NOTIFIED AT LEAST TEN (10) WORKING DAYS PRIOR TO START OF CONSTRUCTION. TELEPHONE (805) 481-6730. CONSTRUCTION WILL NOT TAKE PLACE OUTSIDE OF THE DISTRICT'S STANDARD WORKING HOURS OR ON WEEKENDS UNLESS SPECIFICALLY APPROVED BY DISTRICT. A PRECONSTRUCTION MEETING IS REQUIRED.
2.

INSTALL PVC GRAVITY SEWER PER SPECIFICATION SECTION AND 333112. ALL PIPING SHALL BE INSPECTED AND TESTED IN CONFORMANCE WITH APPLICABLE TECHNICAL SPECIFICATIONS. ALL PIPING SHALL BE CLEANED IN CONFORMANCE WITH THE TECHNICAL SPECIFICATIONS.
3.

EXISTING SEWER LOCATIONS AND FLOWLINE ELEVATIONS SHALL BE VERIFIED BY THE CONTRACTOR BEFORE START OF CONSTRUCTION. THE DISTRICT SHALL BE NOTIFIED IMMEDIATELY OF ANY DISCREPANCIES.
4.

SERVICE LATERALS (SEWER, WATER, GAS, ELECTRIC, COMMUNICATION, ETC.) SHOWN ARE APPROXIMATE AND ARE NOT ALL SHOWN ON THE PLANS. LOCATE AND PROTECT ALL SERVICE LATERALS AND UTILITIES PER SPECIFICATION SECTION 020120. REPLACE OR REPAIR LATERALS AND UTILITIES DAMAGED BY CONSTRUCTION.
5.

SEWER MAINS MUST REMAIN IN SERVICE AT ALL TIMES. SEE SPECIFICATION 015800 FOR SEWER BYPASSING REQUIREMENTS. CONTRACTOR SHALL BE LIABLE FOR FINES AND OTHER COSTS ASSOCIATED WITH SEWAGE SPILLS AND OTHER PROBLEMS CAUSED BY INADEQUATE HANDLING OF SEWER FLOWS.
6.

SHEET AND SHORE TRENCHES AS REQUIRED FOR WORKER PROTECTION IN CONFORMANCE WITH THE SPECIAL PROVISIONS. SHEET AND SHORE TRENCHES TO PROTECT AGAINST:

A.

DAMAGE TO UTILITIES, FACILITIES, AND PROPERTY

B.

ADDITIONAL EXCAVATION AND BACKFILL

C.

ADDITIONAL PAVEMENT

D.

OTHER COSTS AND LIABILITIES ARISING FROM SOIL INSTABILITY

TRAFFIC CONTROL NOTES NOTES

1.

THE CONTRACTOR SHALL PROVIDE A TRAFFIC CONTROL PLAN PER SPECIFICATION 015526. ALL LOCAL EMERGENCY SERVICES AND IMPACTED RESIDENTS SHALL BE NOTIFIED OF ANY DETOURS A MINIMUM OF 72 HOURS IN ADVANCE AND IN ACCORDANCE WITH THE COUNTY OF SAN LUIS OBISPO ENCROACHMENT PERMIT (APPENDIX A). NO FULL ROAD CLOSURES ARE PERMITTED.
2.

THE COUNTY SHALL BE NOTIFIED 24 HOURS PRIOR TO THE INITIAL START OF WORK UNDER THE ENCROACHMENT PERMIT.

ABBREVIATIONS

AC	ASPHALTIC CONCRETE	O.D.	OUTSIDE DIAMETER
ASPH	ASPHALT	PE	PLAIN END
BM	BENCH MARK	PH	POTHOLED UTILITY CROSSING
¢	CENTERLINE	PIP	PROTECT IN PLACE
CTV	CABLE TELEVISION	PL	PROPERTY LINE
CLR	CLEAR	PP	POWER POLE
CO	CLEAN OUT	PS	PIPE STIFFNESS
CONC	CONCRETE	PVC	POLYVINYL CHLORIDE
DIA. (Ø)	DIAMETER	RB	REBAR
DR	DIMENSION RATIO	R/W	RIGHT-OF-WAY
E	EAST	S	SOUTH
EL	ELEVATION	SCH	SCHEDULE
EP	EDGE OF PAVEMENT	SD	STORM DRAIN
(E)	EXISTING	SL	SLOPE
FD	FOUND	SS	SANITARY SEWER
FL	FLOW LINE	SST	STAINLESS STEEL
FO	FIBER OPTIC	STA	STATION
G	GRADE	TS	TRAFFIC SIGNAL
GM	GAS METER	TYP.	TYPICAL
HDPE	HIGH-DENSITY POLYETHYLENE	UE	UNDERGROUND ELECTRICAL CONDUIT
I.D.	INSIDE DIAMETER	VCP	VITRIFIED CLAY PIPE
INV	INVERT	W	WATER
L.F.	LINEAR FOOT	W	WEST
MH	MANHOLE	WL	WALL
MIN	MINIMUM	WM	WATER METER
N	NORTH	WV	WATER VALVE
(N)	NEW		

LEGEND

---	PROPERTY LINE	⊗	SEWER MANHOLE
—R/W—	RIGHT-OF-WAY	o oo	SEWER CLEANOUT
---	ROAD CENTERLINE	▬▬▬▬	RETAINING WALL
---	CONCRETE	PG&E	PG&E BOX
---	EDGE OF PAVEMENT	GM	GAS METER
+++++	ABANDONMENT OF PIPELINE	TEL	TELEPHONE BOX
—x—	FENCE LINE	SG	SIGNAL BOX
—SS—	SEWER MAIN	CATV	CABLE T.V. BOX
—W/L—	WATER SERVICE	ELEC	ELECTRIC BOX
—W—	WATER MAIN	⌚	TELEPHONE MANHOLE
—G—	GAS MAIN	⊙☆	STREET LIGHT
—ETC—	ELEC/TELEPHONE/CABLE	JP ⊙	JOINT POLE
—OHE—	OVERHEAD ELECTRIC	PP ⊙	POWER POLE
—CATV—	COMMUNITY ANTENNA TELEVISION	⊕→	GUY WIRE
—CTV—	CONNECTED TELEVISION	▬▬▬▬	DROP INLET AT CURB
—FO—	FIBER OPTIC	▬▬▬▬	DROP INLET
—OT—	OVERHEAD TELEPHONE	■	(N) BLOW OFF
—UC—	UNDERGROUND COMMUNICATIONS	⊙	(N) AIR VAC ASSEMBLY
⊗	FIRE HYDRANT	●	SURVEY BENCHMARK
⊗	WATER WELL	●	SURVEY MONUMENT SYMBOL
⊗	WATER VALVE	▲	SURVEY MONUMENT WELL SYMBOL
WM	WATER METER		
⊗	STORM DRAIN MANHOLE	PX	POTHOLE LOCATION

AGENCY & UTILITY CONTACTS

AGENCY	CONTACT	PHONE NUMBER
UTILITY SYSTEM MANAGER	TONY MARRACCINO	(805) 481-6730
PG&E	CUSTOMER CONNECTIONS	(800) 468-4742
SOUTHERN CALIFORNIA GAS COMPANY	JASON LEWIS	(805) 681-7939
SOUTH SAN LUIS OBISPO COUNTY SANITATION DISTRICT	JEREMY GHENT	(805) 489-6666
UNDERGROUND SERVICE ALERT		811

APPR

EXP DATE

DESCRIPTION

REG NUMBER

DATE

PROJECT ENGINEER

JOSEPH J. REICHMUTH, PE

C63124

8/30/2026

REG. PROFESSIONAL ENGINEER

JOSEPH J. REICHMUTH

No. C63124

CIVIL

STATE OF CALIFORNIA

mkn

AN ANDURRA COMPANY

354 PACIFIC ST

SAN LUIS OBISPO, CA 93401

(805) 329-4773

OCEANO COMMUNITY SERVICES DISTRICT

CIPS A-3, A-4, AND A-7 SEWER SYSTEM UPGRADES PROJECT

GENERAL NOTES, ABBREVIATIONS, AND LEGEND

DESIGNED:

JJR

DETAILED:

CJD

CHECKED:

APPROVED:

DATE:

AUGUST 2026

0

1/2

1

IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE

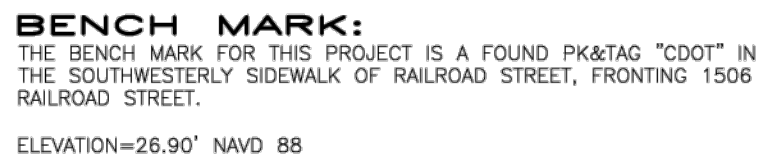
CONTRACT NO.

2026-02

G-002

SHEET

2 OF 7



BASIS OF COORDINATES AND BEARINGS:

THE COORDINATES AND BEARINGS AS MEASURED AND SHOWN HEREON ARE ON GRID AND ARE BASED UPON THE CALIFORNIA COORDINATE SYSTEM OF 1983, CCS83, ZONE 5 0405, (1991.35 EPOCH) IN ACCORDANCE WITH THE CALIFORNIA PUBLIC RESOURCES CODE SECTIONS 8601-8619; SAID COORDINATES AND BEARINGS ARE BASED LOCALLY UPON FIELD-OBSERVED TIES TO THE FOLLOWING PRE-CONSTRUCTION RECORD OF SURVEY OF SLO-1 POST MILE 10.0-16.8 RIGHT-OF-WAY (124 LS 91).

BASIS OF BEARINGS IS BASED UPON AN INVERSE (BEARING N 64° 50' 10" W) BETWEEN THE FOLLOWING TWO STATIONS:

REFERENCED CONTROL STATIONS CONNECTED:

STATION	NORTHING (USFT)	EASTING (USFT)	ELEVATION (USFT)	VERTICAL DATUM
217 PM 12.86	2234181.80	5777901.90	26.90	NAVD 88
208 PM 11.71	2232097.69	5782338.09	38.34	NAVD 88

MAPPING ANGLE AND GRID FACTOR:

STATION	NORTHING (USFT)	EASTING (USFT)	MAPPING ANGLE	COMB. FACTOR	ELEVATION (NAVD88)	ELLIPSOID
217 PM 12.86	2234181.80	5777901.90	-1°29'37.69"	0.99994527	26.90	-88.86

MEASURED DISTANCES SHOWN HEREON OR INVERSED FROM COORDINATES SHOWN HEREON ARE IN REFERENCE TO CCS83. TO APPROXIMATE LOCAL GROUND DISTANCES DIVIDE BY THE COMBINATION FACTOR PROVIDED HEREON. ELEVATIONS ARE ESTABLISHED FROM THE 2020 CITY OF SAN LUIS OBISPO BENCH MARK SYSTEM



X	FENCE LINE		RETAINING WALL
SS	SEWER MAIN		PIPE & BOX
W	WATER MAIN		GAS METER
G	GAS MAIN		TELEPHONE BOX
ETC	ELEC./TELEPHONE/CABLE		SIGNAL BOX
ONE	CL. OF OVERHEAD ELECTRICDROPPED BETWEEN POLES		CABLE TV BOX
	DROP INLET AT CURB		ELECTRIC BOX
	DROP INLET		TELEPHONE MANHOLE
	STORM DRAIN MANHOLE		STREET LIGHT
	FIRE HYDRANT		JOINT POLE
	WATER METER		POWER POLE
	WATER VALVE		GUY WIRE
	WATER METER		MONITORING WELL
	SEWER MANHOLE		BENCH MARK
	SEWER CLEANOUT		FOUND MONUMENT IN WELL
	FOUND MONUMENT		

AC	ASPHALT CONCRETE	IP	IRON PIPE
AP	ANGLE POINT	GB	GRADE BREAK
BM	BENCH MARK	GM	GRADE METER
BLDG	BUILDING	HM	HIGH POINT
BOW	BACK OF WALK	LT	LIGHT
CB	CATCH BASIN	MM	MANHOLE
CF	CURB FACE	PP	POWER POLE
CC	CLEAN OUT	PV	POLYVINYL PIPE
COL	COLUMN	RB	REBAR
CR	CORNER	RCP	REINFORCED CONCRETE PIPE
CONC	CONCRETE	R10	CANOPY RADIUS
CRM	CORRUGATED METAL PIPE	SD	STORM DRAIN
CMU	CONCRETE MASONRY UNITS	SL	POINT ON SLOPE
CWN	CROWN OF STREET	SS	SEWER
DI	DROP INLET	STP	STEP
ED	EXISTING GRADE	ST	STAIRS
EP	EDGE OF PAVEMENT	TOP	TOP OF SLOPE
FD	FOUND	TOE	TOE OF SLOPE
FL	FLOW LINE	TW	TOP OF WALL
FF	FINISH FLOOR	W	WATER
FW	FACE OF WALL	WM	WALL
HSE	HOUSE COR	WM	WATER METER
GR	GRASS	WV	WATER VALVE
GM	GRADE METER		
IP	IRON PIPE	DI-1.5FL	TOP OF GRADE -1.5' FLOW LINE

1. NO TITLE SEARCH (TITLE REPORT) WAS PROVIDED TO THE SURVEYOR. ASSESSMENTS OR OTHER FEE CONVIANCES WHICH MAY AFFECT THE SUBJECT PROPERTY HAVE NOT BEEN PLOTTED.
2. ONLY THE SURFACE EVIDENCE OF UNDERGROUND UTILITIES HAVE BEEN MEASURED IN THE FIELD ON THIS SURVEY. IF APPROXIMATE UNDERGROUND ALIGNMENTS ARE SHOWN, I MAKE NO WARRANTY AS TO THE ACTUAL DEPTHS OF SUCH UTILITIES. CALL UNDERGROUND SERVICE ALERT (USA) AT 1-800-662-2444 TO VERIFY THE ACTUAL LOCATION OF UTILITIES PRIOR TO ANY EXCAVATION. THE SURVEYOR MAKES NO WARRANTY OR INVESTIGATION AS TO SUBSURFACE ENVIRONMENTAL CONDITIONS THAT WOULD AFFECT THE USE OR DEVELOPMENT OF THIS PROPERTY.
3. IT WILL BE THE ARCHITECT'S RESPONSIBILITY TO VERIFY SETBACK AND HEIGHT RESTRICTIONS WITH THE LOCAL GOVERNING AGENCIES.
4. THE SIGNED AND SEALED ORIGINAL DRAWING OF THIS MAP CONSTITUTE THE OFFICIAL RECORD OF THIS SURVEY. SUGGESTIONS WILL NOT BE LIABLE FOR ELECTRONIC VERSIONS OF THIS MAP PROVIDED TO OTHER PARTIES.
5. THE BOUNDARY LINES SHOWN HEREON WERE COMPILED FROM RECORD INFORMATION (I.E. RECORDED DEEDS OR RECORDS) AND ARE NOT INTENDED TO BE A SUBSTITUTE FOR AN ACTION TO DETERMINE THE LINES OF THE SUBJECT PROPERTY. TO DETERMINE THE ACTUAL BOUNDARIES OF THE PROPERTY, THE SURVEYOR RECOMMENDS THAT THE CLIENT OBTAIN A SETTING OF PROPERTY MONUMENTS AND THE FILING OF A CORNER RECORD OR RECORD OF SURVEY IN CONFORMANCE WITH STATE LAW. THE BOUNDARY LINES SHOWN TO PHYSICAL FEATURES (E.G. BUILDINGS, FENCES, WALLS OR TREES, ETC.) SHOWN ON THIS MAP CAN BE VERIFIED BY A PROFESSIONAL FINISHED WORK PRODUCT WHICH IS PLOTTED AT THE SCALE INDICATED.

THIS MAP REPRESENTS A FIELD SURVEY OF SURFACE
FEATURES AND ELEVATIONS PERFORMED ON
MARCH 17, 2026.


MICHAEL B. STANTON, PLS 5702


DATE 3/23/26

OF A PORTION OF BELIDGE STREET,
AS SHOWN ON THE MAP FILED IN BOOK 24 OF MAPS AT PAGE 64,
COUNTY OF SAN LUIS OBISPO,
CALIFORNIA

AT THE REQUEST OF MKN ASSOCIATES

MBS
LAND SURVEYS

MICHAEL B. STANTON, PLS 5702
3559 SOUTH HIGUERA ST.
SAN LUIS OBISPO, CA 93401
805-594-1960

March 23, 2026 JOB #26-030



Know what's below.
Call before you dig.

GENERAL NOTES

- EXISTING WATER, SEWER, AND GAS SERVICE LINE LOCATIONS ARE APPROXIMATE ONLY. LOCATE EXISTING UTILITIES PER SPECIFICATION SECTION 023219. PROTECT EXISTING UTILITIES PER SPECIFICATION SECTION 020120.
- PROJECT SOILS CONSIST OF NON-COHESIVE SANDS AND SILTY SANDS THAT ARE MEDIUM DENSE IN PLACE. THESE SOIL TYPES WILL EXHIBIT RAVELING TO RUNNING GROUND BEHAVIOR WITH LITTLE TO NO STAND-UP TIME IN UNSUPPORTED EXCAVATIONS. CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PREVENT TRENCH AND PIT EXCAVATION WALL FAILURES AND UNDERMINING OF ADJACENT PAVEMENTS, UTILITIES, AND SITE IMPROVEMENTS.
- MAINTAIN SEWER SERVICE AND PROVIDE TEMPORARY SEWER BYPASS PER SPECIFICATION SECTION 015800.
- DEMOLISHED STRIPING AND MARKINGS SHALL BE REPLACED IN KIND PER COUNTY OF SAN LUIS OBISPO ENCROACHMENT PERMIT REQUIREMENTS.
- REPAIR MANHOLES AT PIPE CONNECTIONS PER DETAIL 1 SHEET C-501.
- PROVIDE TRAFFIC CONTROL PER SPECIFICATION SECTION 015526 AND IN ACCORDANCE WITH COUNTY OF SAN LUIS OBISPO ENCROACHMENT PERMIT.
- FIELD VERIFY PIPE INVERTS. CONSTRUCT NEW SEWER WITH CONSTANT SLOPE BETWEEN MANHOLES.



OCEANO COMMUNITY SERVICES DISTRICT
CIPS A-3, A-4, AND A-7 SEWER SYSTEM UPGRADES PROJECT
BELBRIDGE STREET - PLAN AND PROFILE
STA 1+00 TO STA 3+61±

DESIGNED: JJR
DETAILED: CJD
CHECKED:
APPROVED:
DATE: AUGUST 2026
CONTRACT NO. 2026-02
C-101
SHEET 4 OF 7

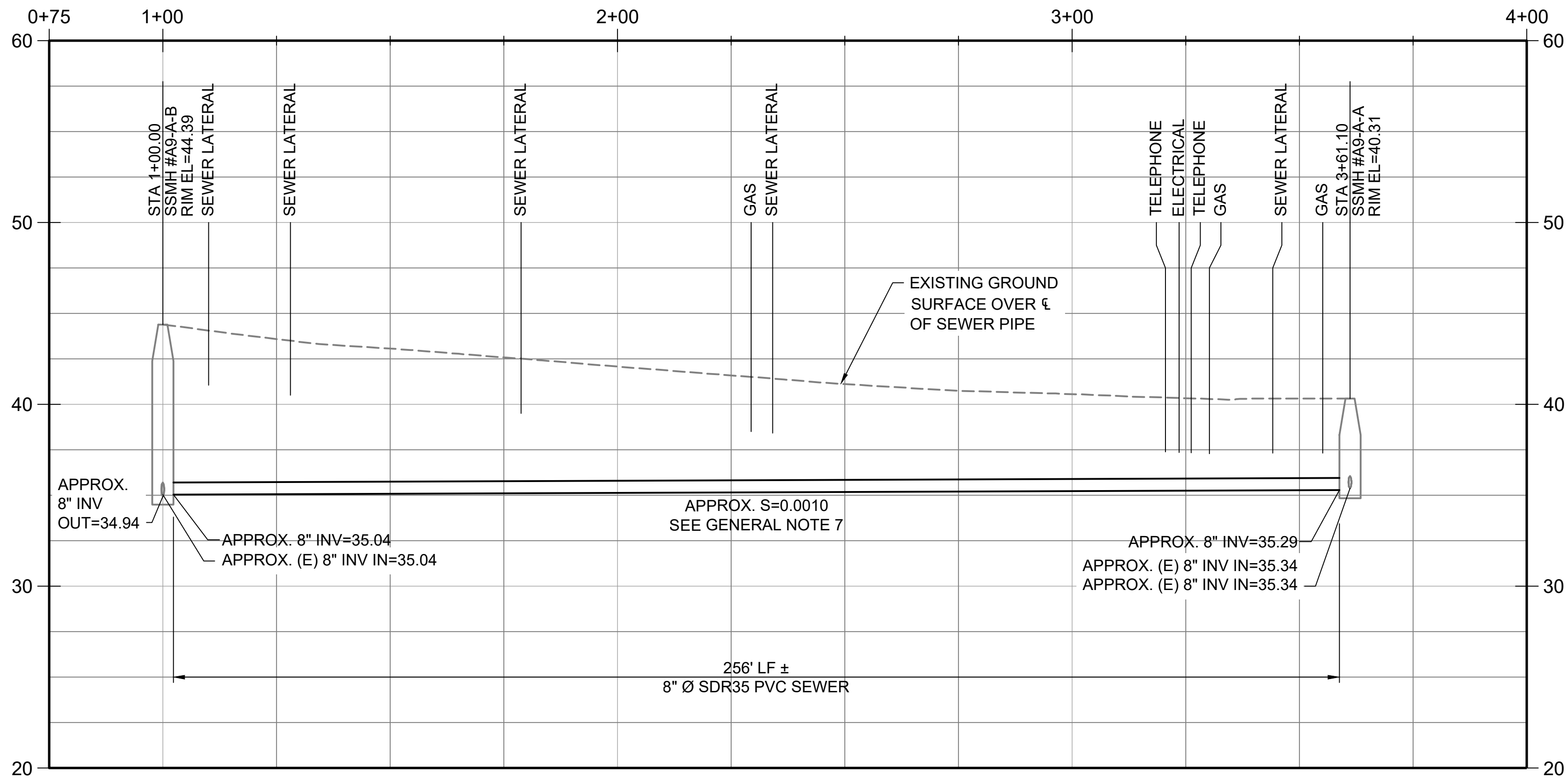
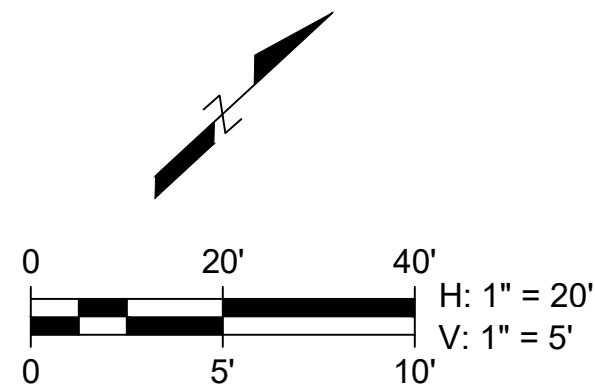


STA 1+00 TO STA 3+61±

SCALE: 1" = 20'

LINE TABLE: ALIGNMENT

LINE #	LENGTH	DIRECTION
L1	261.10	N41° 58' 27"E



CONSTRUCTION NOTES

- REMOVE EXISTING 8" Ø VCP AND INSTALL 8" Ø SDR35 PVC GRAVITY SEWER PER SPECIFICATION SECTION 333112 AND DISTRICT DETAIL W-10, SHEET C-501. MATCH EXISTING MANHOLE INVERTS.
- ASPHALT PAVEMENT SHALL BE REPLACED PER COUNTY OF SAN LUIS OBISPO PUBLIC IMPROVEMENT STANDARD DETAIL R-3 AND ENCROACHMENT PERMIT.
- RECONNECT SERVICE LATERAL PER DISTRICT DETAIL S-5, SHEET C-501. CONNECT NEW AND EXISTING LATERAL PIPING WITH MAXADAPTOR BY GRIPPER GASKET, OR APPROVED EQUAL.
- PROTECT SURVEY MONUMENT IN PLACE. IF DAMAGED, RE-ESTABLISH PER COUNTY OF SAN LUIS OBISPO REQUIREMENTS.
- ABANDON EXISTING CAPPED SEWER LATERAL.

PAVEMENT RESTORATION INDEX

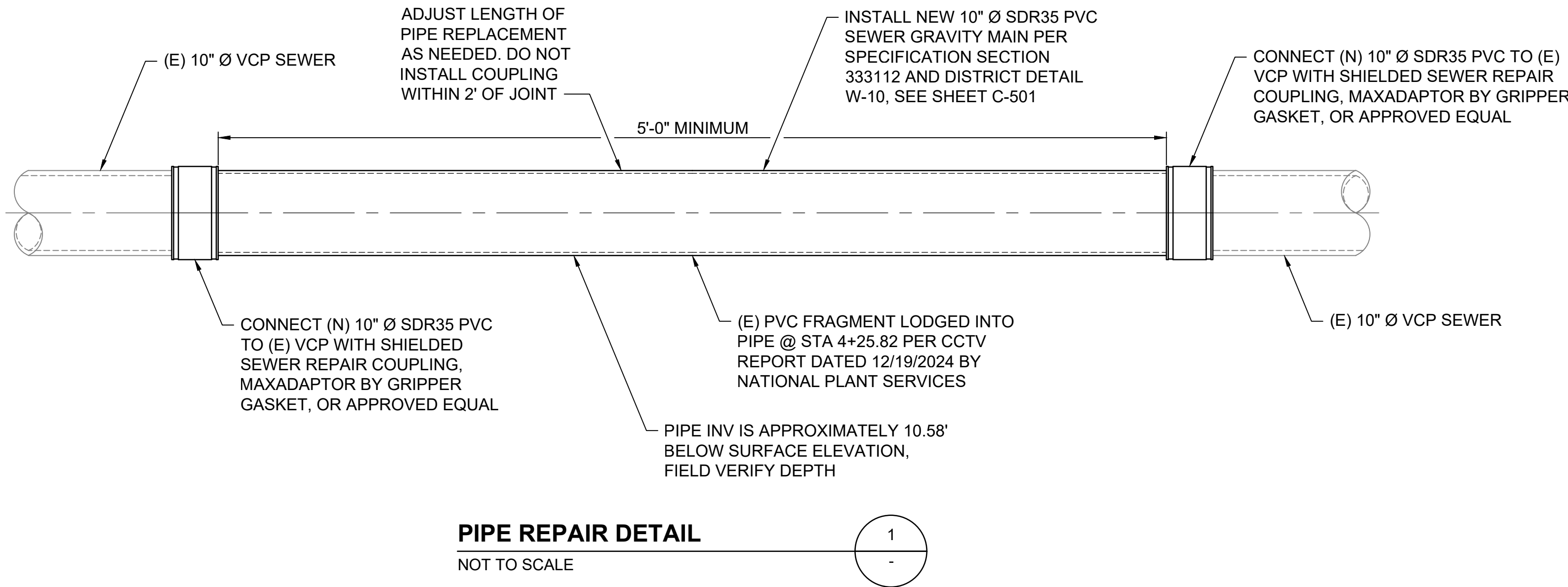
ROADWAY AND PAVEMENT RESTORATION IS REQUIRED FOR EXISTING PAVED SURFACES DISTURBED OR REMOVED BY OPEN TRENCH CONSTRUCTION OF PIPELINES AND APPURTENANCES. COORDINATE REQUIREMENTS WITH COUNTY ENCROACHMENT PERMIT AND INFORMATION BELOW.

STREET	PCI	PAVEMENT RESTORATION REQUIREMENTS
BELBRIDGE AVE.	64	12" MINIMUM T-SECTION

8/4/2026 DWG: K:\Oceanic CSD\Oceanic CSD-A2024-0113 Sanitary Sewer Project\000 Engineering\001 CAD\Plans\SSC-102.dwg Plotted By: SCATTANACH



STA 4+00 TO STA 6+12±
SCALE: 1" = 20'



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- REPAIR MANHOLES AT PIPE CONNECTIONS PER DETAIL 1 SHEET C-501.
- PROVIDE TRAFFIC CONTROL PER SPECIFICATION SECTION 015526 AND IN ACCORDANCE WITH COUNTY OF SAN LUIS OBISPO ENCROACHMENT PERMIT.
- FIELD VERIFY PIPE INVERTS. CONSTRUCT NEW SEWER WITH CONSTANT SLOPE BETWEEN MANHOLES.

CONSTRUCTION NOTES

- ASPHALT PAVEMENT SHALL BE REPLACED PER COUNTY OF SAN LUIS OBISPO PUBLIC IMPROVEMENT STANDARD DETAIL R-3 AND ENCROACHMENT PERMIT

PAVEMENT RESTORATION INDEX

ROADWAY AND PAVEMENT RESTORATION IS REQUIRED FOR EXISTING PAVED SURFACES DISTURBED OR REMOVED BY OPEN TRENCH CONSTRUCTION OF PIPELINES AND APPURTENANCES. COORDINATE REQUIREMENTS WITH COUNTY ENCROACHMENT PERMIT AND INFORMATION BELOW.

STREET	PCI	PAVEMENT RESTORATION REQUIREMENTS
WILMAR AVE.	45	12" MINIMUM T-SECTION



DESIGNED: JJR	APPR: 6/30/2026
DETAILED: CJD	EXP DATE: 6/30/2026
CHECKED:	DESCRIPTION: REG NUMBER: C63124
APPROVED:	PROJECT ENGINEER: JOSEPH J. REICHMUTH, PE
DATE: AUGUST 2026	
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	
CONTRACT NO. 2026-02	
C-102 SHEET 5 OF 7	

OCEANO COMMUNITY SERVICES DISTRICT
CIPS A-3, A-4, AND A-7 SEWER SYSTEM UPGRADES PROJECT

WILMAR AVENUE
STA 4+00 TO STA 6+12±

mkn
AN ARDURRA COMPANY
354 PACIFIC ST
SAN LUIS OBISPO, CA 93401
(805) 323-4773

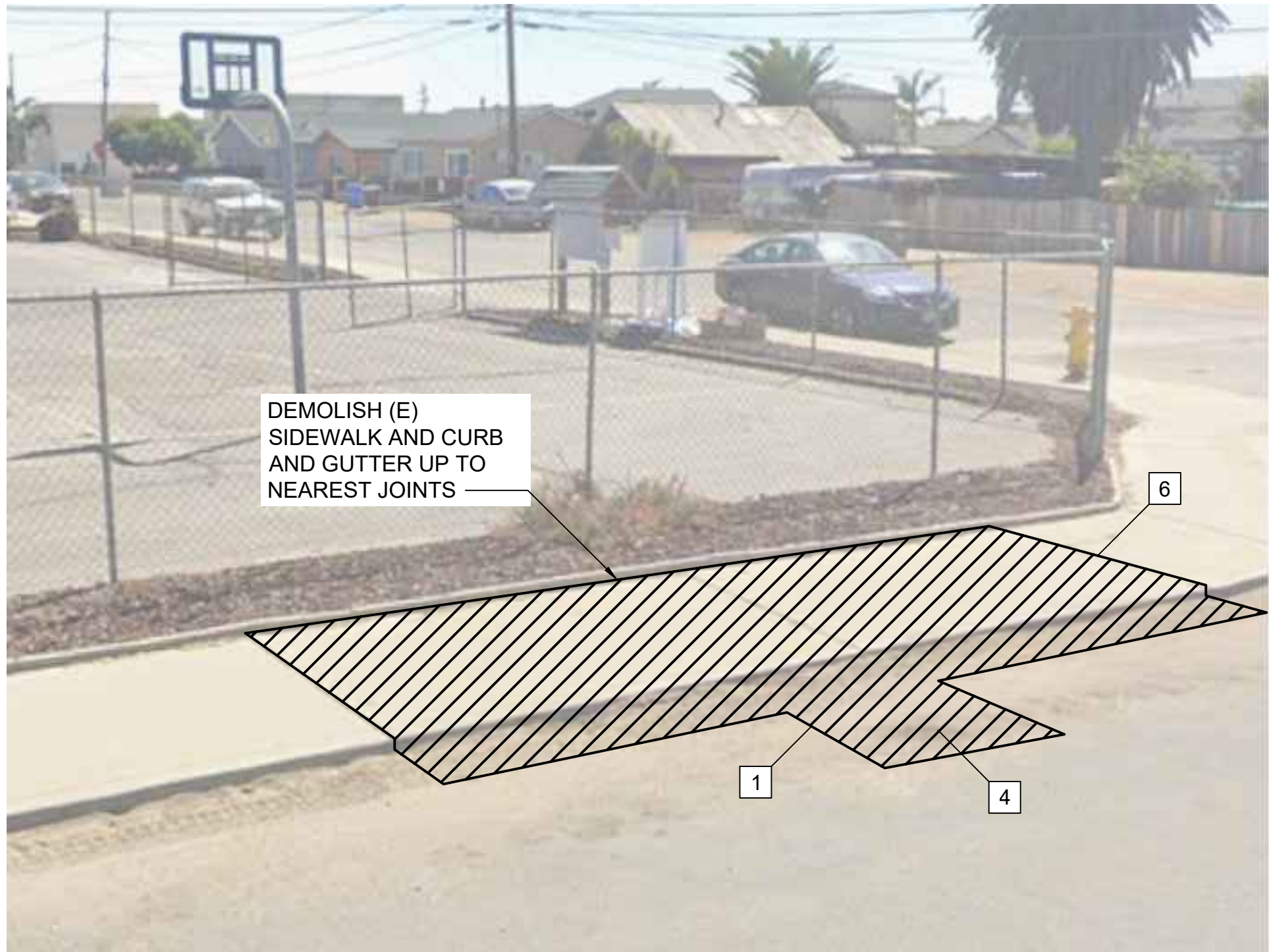
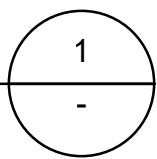
REGISTERED PROFESSIONAL ENGINEER
JOSEPH J. REICHMUTH
No. C63124
CIVIL
STATE OF CALIFORNIA

8/4/2026 DWG: K:\Oceanic CSD\Oceanic CSD-A2024-0113 Sanitary Sewer Project\030 Engineering\031 CAD\Planes\103.dwg Plotted By: SCATTANACH



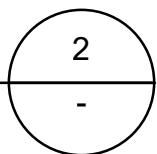
1323 19TH STREET LATERAL REHABILITATION

NOT TO SCALE



1830 19TH STREET LATERAL REHABILITATION

NOT TO SCALE



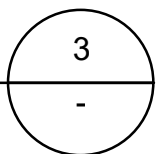
LATERAL REPLACEMENT REPAIR SCHEDULE

LOCATION	APPROX. REPAIR LENGTH (FT)	APPROX. DEPTH OF LATERAL (FT)	REPAIR DISTANCE FROM SEWER MAIN (FT)	DEFECT NOTES
1323 19TH STREET	10	5.42	22 TO 32	ROOT INTRUSION IN LATERAL
1830 19TH STREET	5	5.84	12	SEWER OFFSET UNDERNEATH GUTTER
2160 NIPOMO STREET	15	5.50	0 TO 15	BELLY IN SEWER LATERAL



2160 NIPOMO STREET LATERAL REHABILITATION

NOT TO SCALE



GENERAL NOTES

- EXISTING WATER, SEWER, AND GAS SERVICE LINE LOCATIONS ARE APPROXIMATE ONLY. LOCATE EXISTING UTILITIES PER SPECIFICATION SECTION 023219. PROTECT EXISTING UTILITIES PER SPECIFICATION SECTION 020120.
- PROJECT SOILS CONSIST OF NON-COHESIVE SANDS AND SILTY SANDS THAT ARE MEDIUM DENSE IN PLACE. THESE SOIL TYPES WILL EXHIBIT RAVELING TO RUNNING GROUND BEHAVIOR WITH LITTLE TO NO STAND-UP TIME IN UNSUPPORTED EXCAVATIONS. CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PREVENT TRENCH AND PIT EXCAVATION WALL FAILURES AND UNDERMINING OF ADJACENT PAVEMENTS, UTILITIES, AND SITE IMPROVEMENTS.
- MAINTAIN SEWER SERVICE AND PROVIDE TEMPORARY SEWER BYPASS PER SPECIFICATION SECTION 015800.
- DEMOLISHED STRIPING AND MARKINGS SHALL BE REPLACED IN KIND PER COUNTY OF SAN LUIS OBISPO ENCROACHMENT PERMIT REQUIREMENTS.
- REPAIR MANHOLES AT PIPE CONNECTIONS PER DETAIL 1 SHEET C-501.
- PROVIDE TRAFFIC CONTROL PER SPECIFICATION SECTION 015526 AND IN ACCORDANCE WITH COUNTY OF SAN LUIS OBISPO ENCROACHMENT PERMIT.
- FIELD VERIFY PIPE INVERTS. CONSTRUCT NEW SEWER WITH CONSTANT SLOPE BETWEEN MANHOLES.

CONSTRUCTION NOTES

- PAVEMENT REHABILITATION PER COUNTY OF SAN LUIS OBISPO PUBLIC IMPROVEMENT STANDARDS AND ENCROACHMENT PERMIT.
- REPLACE HMA DIKE PER COUNTY OF SAN LUIS OBISPO STANDARD DRAWING C-6 AS REQUIRED.
- REMOVE AND DISPOSE OF LANDSCAPING TO EXTENTS REQUIRED TO FACILITATE CONSTRUCTION. DEMOLISH 10' OF (E) 4" Ø VCP SEWER LATERAL. INSTALL 4" Ø SDR35 PIPE WITH SHIELDED REPAIR COUPLERS (MAXADAPTOR BY GRIPPER GASKET, OR APPROVED EQUAL). BACKFILL PER DISTRICT STANDARD DETAIL W-10, SHEET C-501, AND SPECIFICATION SECTION 312316.
- DEMOLISH 5' OF (E) 4" VCP SEWER LATERAL. INSTALL 4" Ø SDR35 PIPE WITH SHIELDED REPAIR COUPLERS (MAXADAPTOR BY GRIPPER GASKET, OR APPROVED EQUAL). BACKFILL PER DISTRICT STANDARD DETAIL W-10, SHEET C-501, AND SPECIFICATION SECTION 312316.
- DEMOLISH 15' OF (E) VCP LATERAL. INSTALL 4" Ø SDR 35 PIPE WITH SHIELDED REPAIR COUPLERS (MAXADAPTOR BY GRIPPER GASKET, OR APPROVED EQUAL). BACKFILL PER DISTRICT STANDARD DETAIL W-10, SHEET C-501, AND SPECIFICATION SECTION 312316.
- REPAIR SIDEWALK, CURB, GUTTER, AND PAVING PER COUNTY STANDARD C-4 AND R-4, SEE SHEET C-501.
- POTHOLE (E) 27" Ø SSLOCSD TRUNK MAIN PER SPECIFICATION SECTION 023219 PRIOR TO EXCAVATION.

LEGEND

////// TO BE DEMOLISHED AS INDICATED

APPR	EXP DATE	DESCRIPTION	REG NUMBER
	6/30/2026		C63124
REV	DATE	PROJECT ENGINEER	
		JOSEPH J. REICHMUTH, PE	

REGISTERED PROFESSIONAL ENGINEER
JOSEPH J. REICHMUTH
No. C63124
CIVIL
STATE OF CALIFORNIA

354 PACIFIC ST
SAN LUIS OBISPO, CA 93401
(805) 323-4773

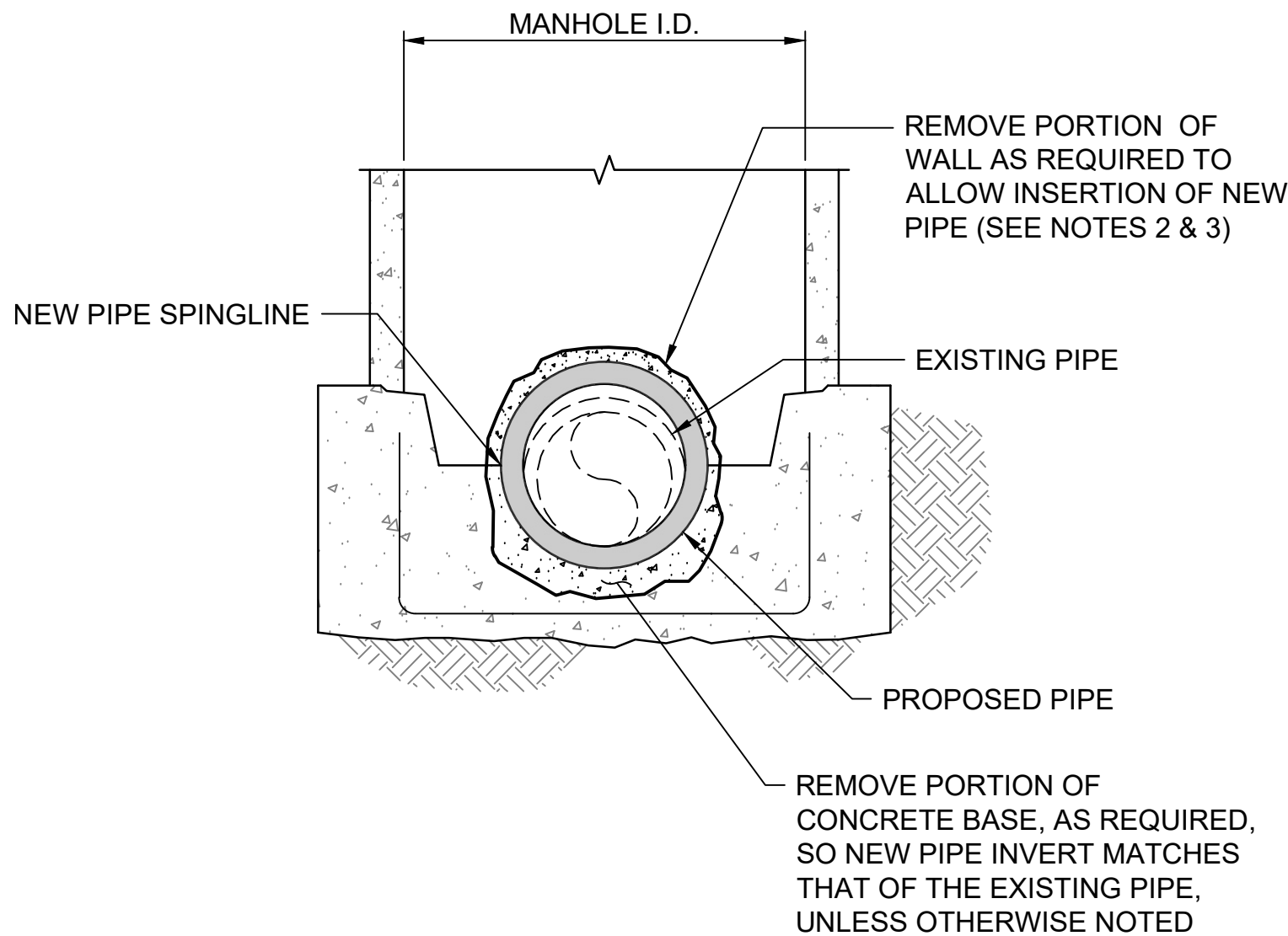
OCEANO COMMUNITY SERVICES DISTRICT
CIPS A-3, A-4, AND A-7 SEWER SYSTEM UPGRADES PROJECT

SEWER LATERAL REPLACEMENT DETAILS

DESIGNED:	JJR
DETAILED:	CJD
CHECKED:	
APPROVED:	
DATE:	AUGUST 2026

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IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE

CONTRACT NO.	2026-02
C-103	
SHEET	6 OF 7

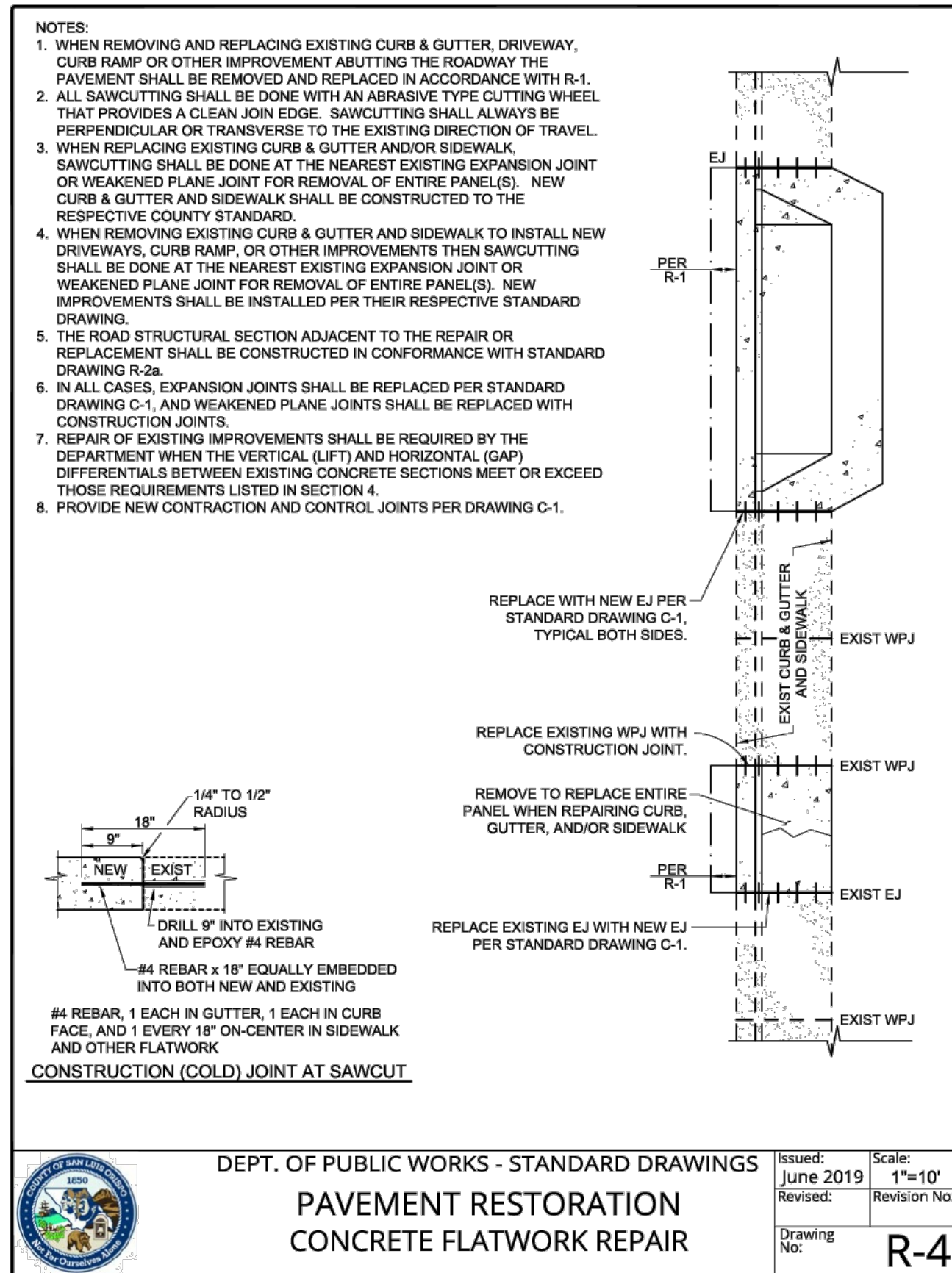
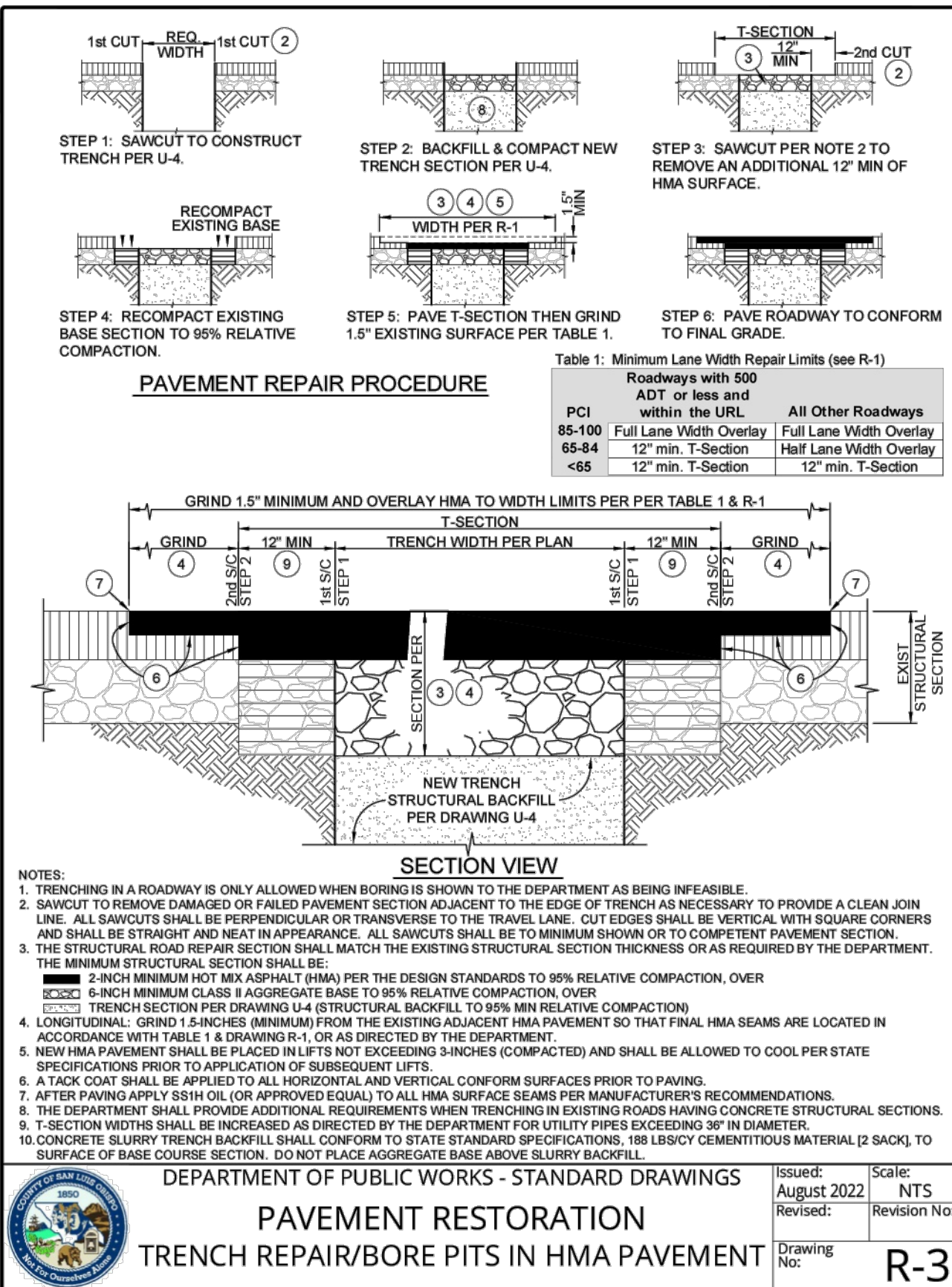
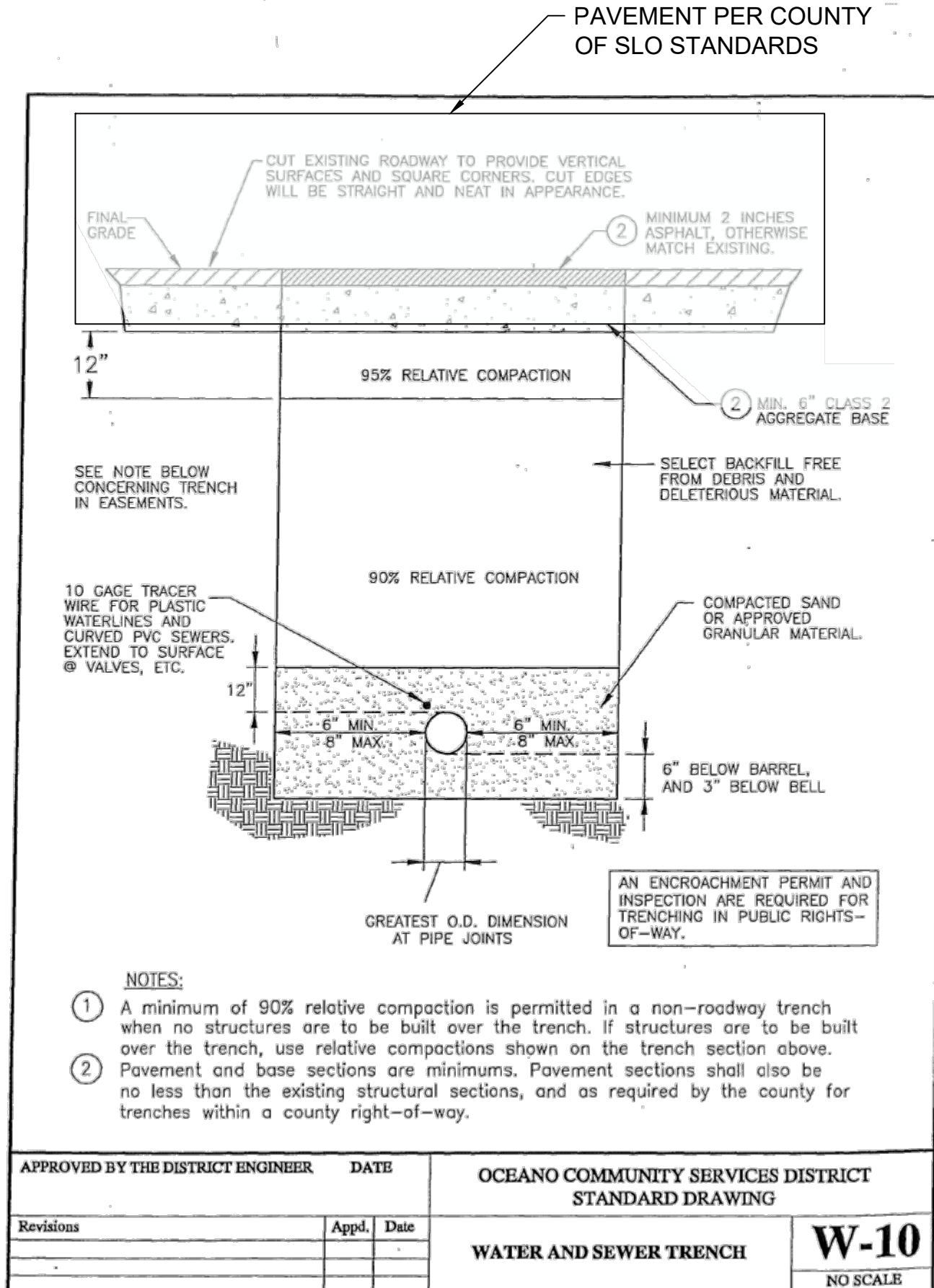
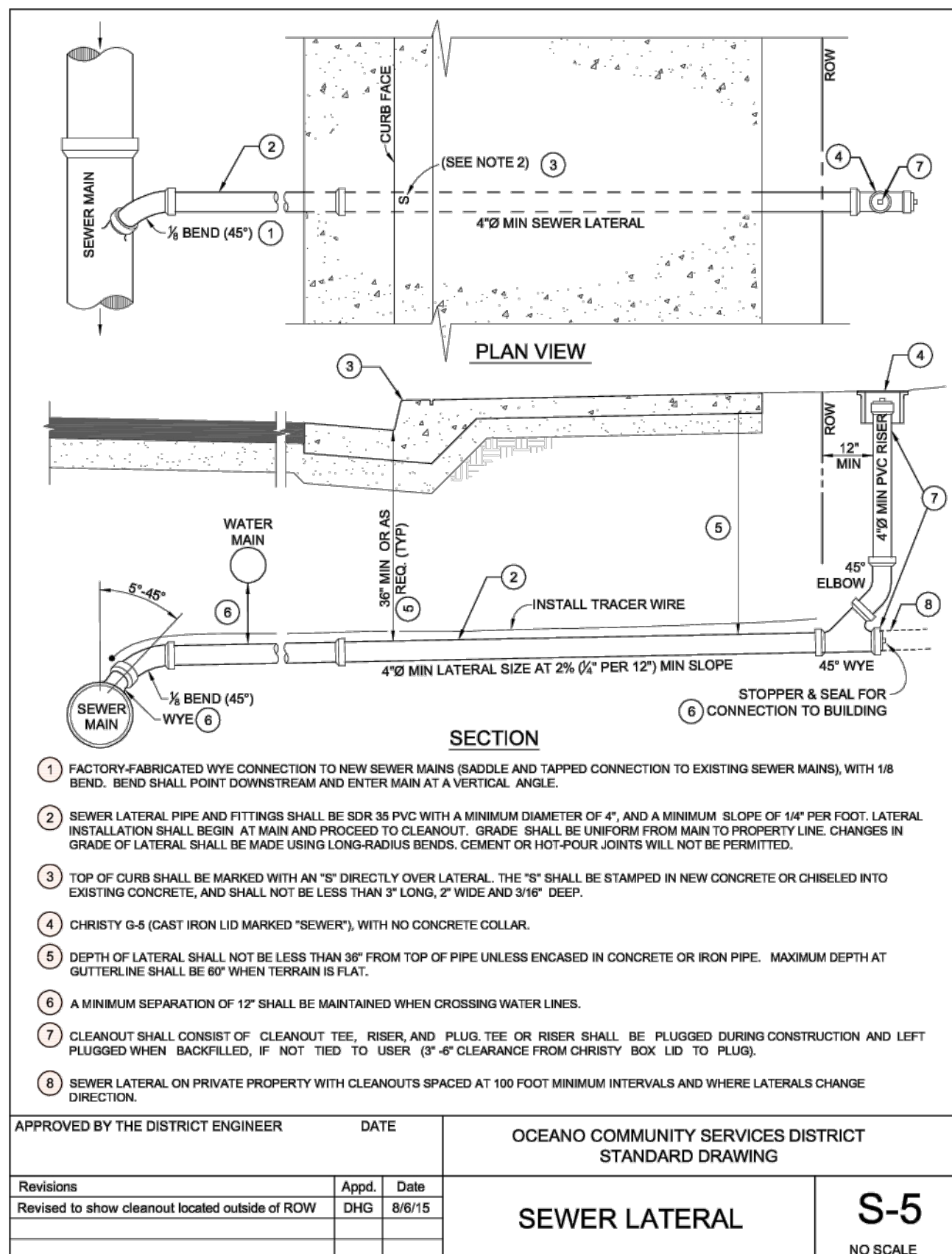
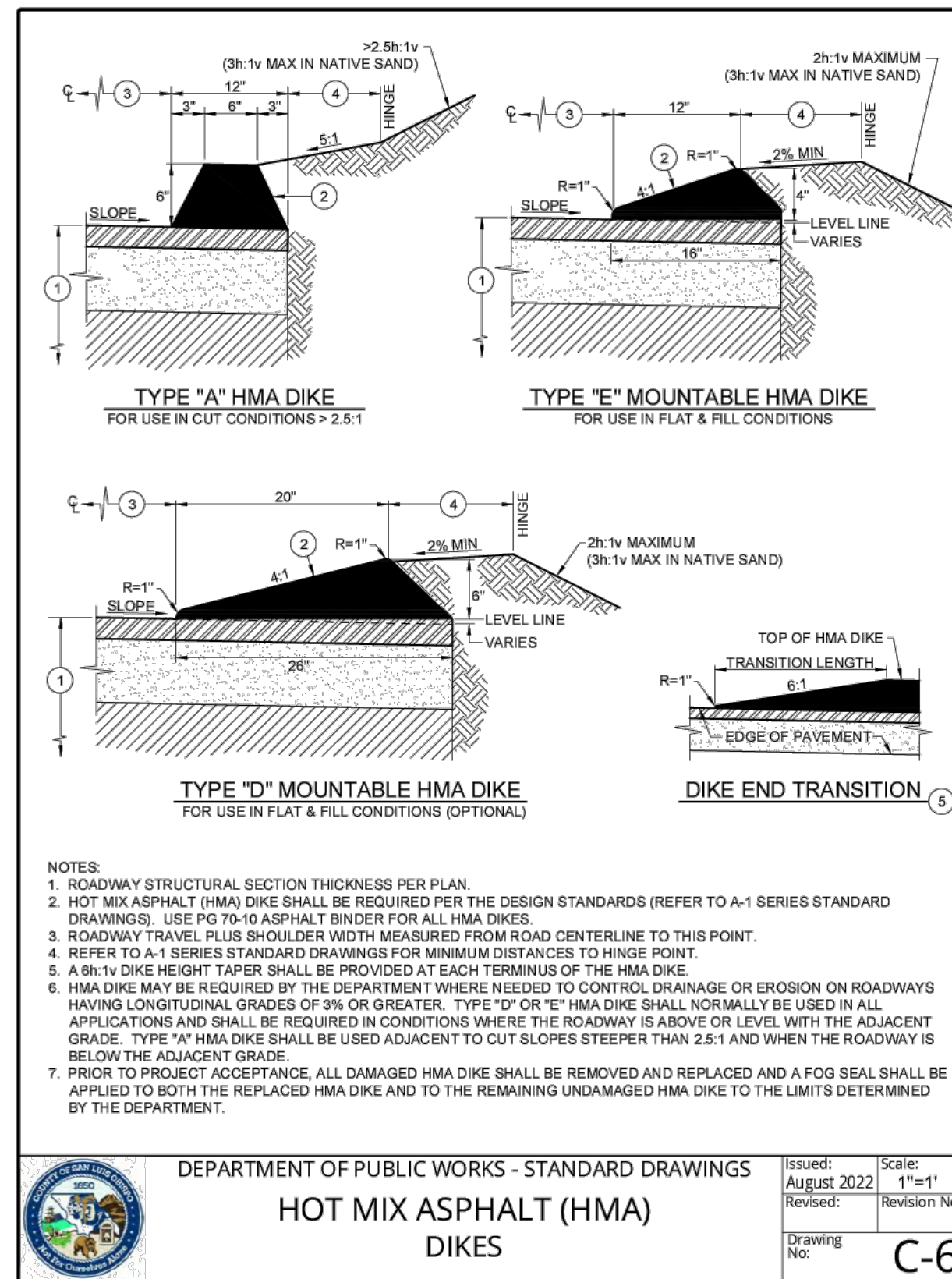
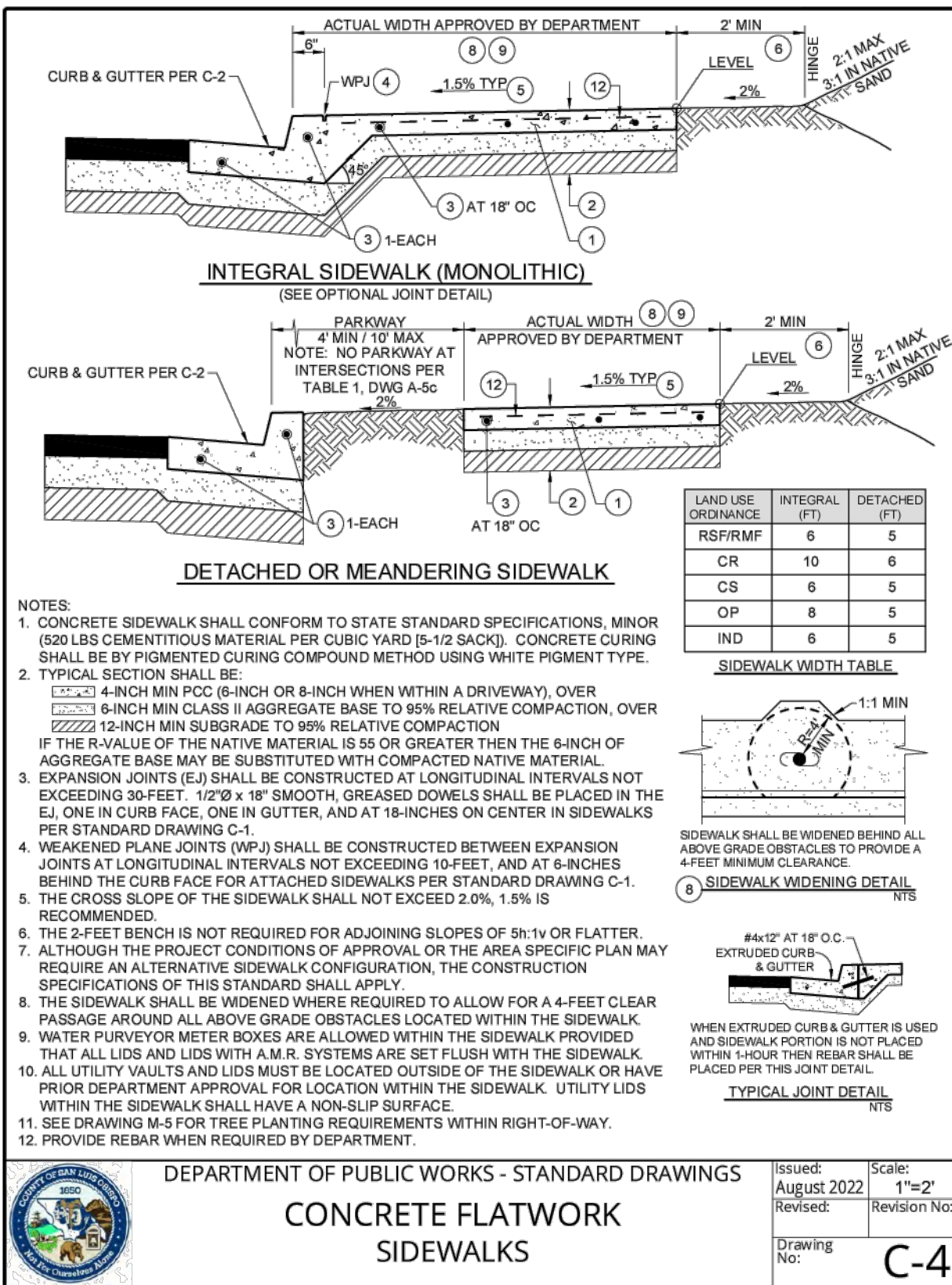


MANHOLE REPAIR DETAIL

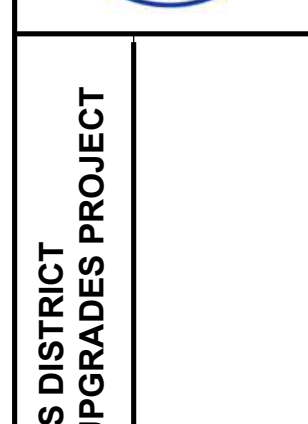
NOT TO SCALE

NOTES:

- PVC PIPE INSERTED INTO MANHOLES SHALL BE CUT AT APPROPRIATE ANGLE TO FIT FLUSH WITH INSIDE MANHOLE WALL FACE. MAINTAIN THE EXISTING CHANNEL.
- INSTALL O-RING WATERSTOP SEAL AROUND NEW PIPE AND CENTERED WITHIN EXISTING MANHOLE WALL.
- FILL ANNULAR SPACE BETWEEN NEW PIPE AND EXISTING MANHOLE WALL WITH NON-PERMEABLE NON-SHRINK GROUT. ROUGHEN EXISTING CONCRETE SURFACE TO FULL AMPLITUDE OF $\frac{1}{4}$ " AND APPLY A BONDING AGENT PRIOR TO PLACING NON-SHRINK GROUT.
- RECONSTRUCT BENCHES AND CHANNELS WITH RAPID-SETTING REPAIR CONCRETE. FINISHED SURFACE OF REPAIRS SHALL BE SMOOTH AND EVEN WITH EXISTING SURFACE. DO NOT FEATHER REPAIR CONCRETE TO MEET EXISTING CONCRETE. CONCRETE SHALL BE ALLOWED TO SUFFICIENTLY CURE PRIOR TO BEING SUBJECT TO IMMERSION.



APPR	EXP DATE
DESCRIPTION	REG NUMBER
DATE	PROJECT ENGINEER
REV	JOSEPH J. REICHMUTH, PE
NO.	C63124
DATE	8/30/2026



OCEANO COMMUNITY SERVICES CIPS A-3, A-4, AND A-7 SEWER SYSTEM U		CIVIL DETAILS - 1	
DESIGNED:	JJR		
DETAILED:	CJD		
CHECKED:			
APPROVED:			
DATE:	AUGUST 2026		
0 1/2 1			
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE			
CONTRACT NO.			

CIPs A-3, A-4, and A-7 Sewer System Upgrades Project

TECHNICAL SPECIFICATIONS

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023219 SUBSURFACE UTILITY LOCATING (POTHOLING)

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333112 PVC GRAVITY SEWER PIPE

APPENDICIES

APPENDIX A: COUNTY OF SAN LUIS OBISPO DRAFT ENCROACHMENT PERMIT



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SECTION 011100 COORDINATION OF WORK, PERMITS, AND REGULATIONS

PART 1 - GENERAL

1.01 DESCRIPTION

- A. This section generally describes the project and includes Contractor's use of premises, permits, and regulations.

1.02 GENERAL NATURE OF WORK

- A. In general, the work involves replacement of approximately 254 linear feet of 8-inch diameter sewer pipe, point repair of 10-inch diameter sewer pipe, and point repair of three sewer laterals.

1.03 LOCATION OF PROJECT SITE

- A. The project site is located within the unincorporated community of Oceano, California. Sewer system upgrades will be constructed within:
 - 1. Belridge Street between 13th Street and Highway 1
 - 2. Wilmar Avenue between 23rd Street and 24th Street
 - 3. 1830 19th Street: Ocean Street between 19th Street and 20th Street
 - 4. 1323 19th Street: 19th Street between Wilmar Avenue and The Pike
 - 5. 2160 Nipomo Street: Nipomo Street between 21st Street and 22nd Street

1.04 WORK SEQUENCE AND SCHEDULE

- A. No disruption to existing sewer mains and laterals will be allowed until approval of Sewage Bypass Plan. Contractor to provide notice to the District at least 10 working days prior to performing the work. All work involving disruption of sewage flows shall be done in the presence of authorized District personnel or Owner's Representative.

1.05 CONTRACTOR'S USE OF PREMISES

- A. Maintain access to business and residential driveways at all times.
- B. No full road closures are permitted.
- C. Contractor is responsible for locating and negotiating the right to use all staging areas required beyond the right-of-way along the project alignment per Part 1.10 of this specification.

- D. Provide adequate signage, barriers, and flagmen, if necessary, in order to ensure the safe diversion of traffic, bicyclist, and/or pedestrians. Ensure continued adequate access from/to adjacent properties. Placement of no parking signs shall occur at least 72 hours in advance.
- E. All project construction activities shall comply with local Noise Ordinances.
- F. During construction implement air pollution mitigation measures per San Luis Obispo APCD requirements.
- G. Contractor shall keep a copy of County of San Luis Obispo encroachment permit at the site of the work to be shown to any representative of the County or any law enforcement officer upon request.

1.06 PRE-CONSTRUCTION VIDEO

- A. The contractor shall video record and document the pre-existing conditions at and around each project site. Submit the recording to the District prior to the start of construction.

1.07 MAINTENANCE AND OPERATION OF EXISTING FACILITIES

- A. Sewer main must remain in service at all times. Contractor to provide temporary sewage bypassing to keep main in service during the work per Section 015800. Sewers shall not be allowed to surcharge or operate in such a way that facilities are damaged or risk of sewage spill are increased.

1.08 PERMITS

Name or Type of Permit	Name, Address, Telephone Number of Permitting Agency
County of San Luis Obispo Encroachment Permit	San Luis Obispo County Department of Public Works County Government Center, Room 207 San Luis Obispo, CA 93408 (805) 781-5252
Construction Water Permit for water obtained from District-owned fire hydrants	Oceano Community Services District 1655 Front St, Oceano, CA 93445 (805) 481-6730

- A. The permits contain requirements that may affect the cost of project work. Comply with the permit requirements.

1.09 WORK WITHIN THE COUNTY RIGHT-OF-WAY

- A. All work within the County Right-of-Way shall conform to the provisions contained in the Draft County Encroachment Permit (Appendix A).

- B. Schedule a pre-construction meeting prior to commencing the work. Invitees shall include representatives of the owner, the contractor, affected utility companies (if any), and the County Public Works Inspector.

1.10 RIGHTS-OF-WAY

- A. The construction activities shall be limited to public rights-of-way shown on the drawings unless additional arrangements are made with adjacent property owners. These public rights-of-way shown on the drawings constitute the work area. The Contractor will not be allowed to acquire additional land for construction of the project without consultation and coordination with the Owner. The Contractor shall also coordinate with and obtain the support of residents living or doing business in the immediate area of such land acquisitions.
- B. Contractor shall contact all utilities to determine the location of any existing facilities prior to any excavation, including any utility not affiliated with Underground Service Alert. The dates and names of contact shall be kept at the Project site. Contractor shall immediately notify the owning utility should any damage occur to an existing facility.
- C. Contractor to notify County of San Luis Obispo 24 hours prior to initial start of work.
- D. Contractor to contact the County of San Luis Obispo encroachment permit unit via email at pw.permits@co.slo.ca.us or call (805) 305-1516 a minimum of 48 hours in advance to schedule inspections, prior to commencing the work for final inspection.

PART 2 - MATERIALS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

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SECTION 012000 MEASUREMENT AND PAYMENT

PART 1 - GENERAL

1.01 WORK LISTED IN THE SCHEDULE OF WORK ITEMS

- A. Work under this contract will be paid on a unit price or lump-sum basis as outlined on the Bid Form.
- B. The unit prices and lump-sum prices include full compensation for furnishing the labor, materials, tools, and equipment and doing all the work involved to complete the work included in the contract documents.
- C. The application for payment will be for a specific item based on the percentage completed or quantity installed. The percentage complete will be based on the value of the partially completed work relative to the value of the item when entirely completed and ready for service.

1.02 WORK NOT LISTED IN THE SCHEDULE OF WORK ITEMS

- A. The General Conditions, general requirements, and specifications which are not listed in the schedule of work items of the Bid Form are, in general, applicable to more than one listed work item, and no separate work item is provided therefor. Include the cost of work not listed but necessary to complete the project designated in the contract documents in the various listed work items of the Bid Form.
- B. The bids for the work are intended to establish a total cost for the work in its entirety. Should the Contractor feel that the cost for the work has not been established by specific items in the Bid Form, include the cost for that work in some related bid item so that the Proposal for the project reflects the total cost for completing the work in its entirety.

1.03 POTHOLING

- A. Potholing of utilities shown on the project drawings shall not be paid as a separate item. The costs of performing potholing services shall be included in the various listed work items of the bid schedule for which potholing is required.

1.04 BID ITEMS

- A. Bid Item 1 – Mobilization/Demobilization

Payment for mobilization (75% of the bid item) shall be made at the time of the first progress payment after the Contractor has purchased bonds and insurance and has moved equipment onsite. Payment for demobilization (25% of bid item) shall be made on a lump sum basis with the final payment estimate.

- B. Bid Item 2 – Sheeting, Shoring, Bracing, and Excavation Safety Measures

Measurement for payment for sheeting, shoring, bracing, and excavation safety measures shall be on a percent complete basis based on the lump sum amount and shall include full compensation for furnishing the labor, materials, tools, equipment, and performing all work involved for providing sheeting and shoring and bracing for the protection of life and limb and protection of existing utilities, and shall include, but is not limited to: complying with all applicable federal, state, and local regulations; design of shoring and/or bracing by a civil/structural engineer as required; providing jacks, trench boxes, sheets, shoring, piles, etc., as required to comply with the specifications, regulations and the drawings; protecting in place and bracing existing utilities.

C. Bid Item 3 – 1323 19th Street Lateral Rehabilitation

Measurement for payment for this bid item shall be made on a percent complete basis, based on the lump sum amount for this item, and shall include full compensation for furnishing the labor, materials, tools, and equipment and doing all the work required to complete the lateral rehabilitation as shown on Detail 1 on Sheet C-103. This item includes but is not limited to pipe, fittings, wyes, trench excavation, erosion control, pipe bedding, trench backfill and compaction, slurry backfill, installation and removal of temporary asphalt concrete, removal and disposal of landscaping, removal and disposal of existing pipe and trench materials including asphalt, additional utility investigation, protecting existing facilities and replacement of HMA dike associated with the repair and replacement of the sewer lateral.

D. Bid Item 4 – 1830 19th Street Lateral Rehabilitation

Measurement for payment for this bid item shall be made on a percent complete basis, based on the lump sum amount for this item, and shall include full compensation for furnishing the labor, materials, tools, and equipment and doing all the work required to complete the lateral rehabilitation as shown on Detail 2 on Sheet C-103. This includes but is not limited to pipe, fittings, wyes, trench excavation, erosion control, demolition and repair of concrete sidewalk, curb, and gutter, pipe bedding, trench backfill and compaction, slurry backfill, installation and removal of temporary asphalt concrete, removal and disposal of existing pipe and trench materials including asphalt, additional utility investigation, and protecting existing facilities associated with the repair and replacement of the sewer lateral.

E. Bid Item 5 – 2160 Nipomo Street Lateral Replacement

Measurement for payment for this bid item shall be made on a percent complete basis, based on the lump sum amount for this item, and shall include full compensation for furnishing the labor, materials, tools, and equipment and doing all the work required to complete the lateral rehabilitation as shown on Detail 3 on Sheet C-103. This includes but is not limited to pipe, fittings, wyes, trench excavation, erosion control, demolition and repair of concrete sidewalk, pipe bedding, trench backfill and compaction, slurry backfill, installation and removal of temporary asphalt concrete, removal and disposal of existing pipe and trench materials including asphalt, additional utility investigation, and protecting existing facilities associated with the repair and replacement of the sewer lateral.

F. Bid Item 6 – Water Pollution Control Plan

Measurement for payment for this bid item shall be on a lump sum basis. The District requires a Water Pollution Control Plan (WPCP) for all construction projects that pose a threat to water quality during construction operations. Contractor must coordinate with the District to determine which locations are in high-priority areas. Full compensation for preparation of the Water Pollution Control Plan, including all labor, materials, tools, equipment, best management practices, monitoring, inspection, reporting, correction of deficiencies, and incidentals and conforming to all application provisions of the Standard Specifications and these contract documents and the requirements of the Owner shall be considered as included in the lump sum price for this Bid Item, complete and in place and no additional compensation will be allowed therefor.

G. Belridge Street

1. Bid Item 8a – 8” SDR35 PVC Sewer Pipe Sta. 1+00 to 3+61

Measurement for payment for this bid item shall be on a lineal foot basis and shall include full compensation for furnishing the labor, materials, tools, equipment, and performing all work involved with installing the pipeline and appurtenances from Station 1+00 to 3+61. This includes but is not limited to pipe, fittings, wyes, trench excavation, erosion control, pipe bedding, trench backfill and compaction, slurry backfill, installation and removal of temporary asphalt concrete, placement of new Class 2 aggregate base, removal and disposal of existing pipe and trench materials including asphalt, additional utility investigation, protecting existing facilities, and furnishing all labor, materials, tools, and equipment associated with the installation of the 8-inch PVC (SDR35) sewer line to replace existing 8-inch VCP sewer line.

2. Bid Item 8b – Belridge Street Traffic Control

Measurement for payment for traffic control shall be made on a percent complete basis, based on the lump sum amount for this item, and shall include full compensation for furnishing the labor, materials, tools, and equipment and doing all the work required to implement Traffic regulation/control on Belridge Street throughout the project duration in accordance with the Contract Documents, District standards, Caltrans standards, and the County of San Luis Obispo Encroachment Permit.

3. Bid Item 8c – Belridge Street Temporary Bypassing

Measurement for payment for this item shall be made on a percent complete basis, based on the lump sum amount for this item, and shall include full compensation for furnishing the labor, materials, tools, and equipment and performing all work required to implement Temporary Sewage Bypass on Belridge Street in accordance with the Contract Documents including, but not limited to: Installing, operating, and maintaining all power, primary and standby pumps; appurtenances; bypass piping; temporary piping; providing pumper trucks; clean up in the event of a spill;

monitoring of bypass equipment; other work necessary to maintain existing sewer flows and services around work areas.

4. Bid Item 8d – Lateral Connection to PVC Sewer Pipe

Measurement for payment will be made on a unit price per each lateral connection, which price shall include all costs for furnishing the labor, materials, tools, equipment, and performing all work involved with reconnection of existing service laterals. This includes but is not limited to pipe, fittings, wyes, trench excavation, erosion control, pipe bedding, trench backfill and compaction, slurry backfill, disposal of trench materials, removal and restoration of asphalt pavement, and protecting existing facilities.

5. Bid Item 8e – Pavement Trench Repair

Measurement for payment for pavement trench repair shall be made on a per ton basis assuming up to a 30-inch wide trench with a full pavement repair section. The minimum asphalt pave back over the trench is assumed be the thickness of the existing asphalt plus 1-inch and shall extend 12-inches beyond edge of trench per County of San Luis Obispo Standards. Existing asphalt section is assumed to be 4.5-inches thick. Work shall include full compensation for furnishing the labor, materials, tools, and equipment and performing all work involved in accordance with the Contract Documents including but not limited to secondary saw cutting, removal and disposal of existing pavement by use of grinder, placement of new pavement, surface finishing, connection to existing pavement, preparation prior to placing pavement, pavement restoration, striping and marking per County of San Luis Obispo Standards and the specifications, and transition to existing pavement grade.

H. Wilmar Avenue

1. Bid Item 9a – Point Repair 10” Pipe

Measurement for payment for this bid item shall be made on a percent complete basis, based on the lump sum amount for this item, and shall include full compensation for furnishing the labor, materials, tools, and equipment and doing all the work required to complete the point repair as shown on Detail 1 on Sheet C-102. This includes but is not limited to pipe, fittings, wyes, trench excavation, erosion control, pipe bedding, trench backfill and compaction, slurry backfill, installation and removal of temporary asphalt concrete, disposal of existing pipe and trench materials including asphalt, placement of new Class 2 aggregate base, additional utility investigation, protecting existing facilities, and furnishing all labor, materials, tools and equipment associated with point repair and replacement of 10-inch VCP sewer line with 10-inch PVC (SDR35) sewer line.

2. Bid Item 9b – Wilmar Avenue Traffic Control

Measurement for payment for traffic control shall be made on a percent complete basis, based on the lump sum amount for this item, and shall include full compensation for furnishing the labor, materials, tools, and equipment and doing all the work required to implement Traffic regulation/control on Wilmar Avenue throughout the project duration in accordance with the Contract Documents, District standards, Caltrans standards, and the County of San Luis Obispo encroachment permit.

3. Bid Item 9c – Wilmar Avenue Temporary Bypassing

Measurement for payment for this item shall be made on a percent complete basis, based on the lump sum amount for this item, and shall include full compensation for furnishing the labor, materials, tools, and equipment and performing all work required to implement Temporary Sewage Bypass on Wilmar Avenue in accordance with the Contract Documents including, but not limited to: Installing, operating, and maintaining all power, primary and standby pumps; appurtenances; bypass piping; temporary piping; providing pumper trucks; clean up in the event of a spill; monitoring of bypass equipment; other work necessary to maintain existing sewer flows and services around work areas.

4. Bid Item 9d – Pavement Trench Repair

Measurement for payment for pavement trench repair shall be made on a percent complete basis, based on the lump sum amount for this item, assuming up to a 30-inch wide trench with a full pavement repair section. The minimum asphalt pave back over the trench is assumed to be the thickness of the existing asphalt plus 1-inch and shall extend 12-inches beyond edge of trench per County of San Luis Obispo Standards. Existing asphalt section is assumed to be 4.5-inches thick. Work shall include full compensation for furnishing the labor, materials, tools, and equipment and performing all work involved in accordance with the Contract Documents including but not limited secondary saw cutting, removal and disposal of existing pavement by use of grinder, placement of new pavement, surface finishing, connection to existing pavement, preparation prior to placing pavement, pavement restoration, striping and marking per County of San Luis Obispo Standards and the specifications, and transition to existing pavement grade.

PART 2 - MATERIALS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

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SECTION 013300 SUBMITTALS

PART 1 - GENERAL

1.01 SHOP DRAWINGS

- A. Submit shop drawings in accordance with the General Conditions.
- B. The use of contract drawing reproductions for shop drawings is subject to rejection.
- C. Submit shop drawings electronically in .PDF format. Files less than 20MB in size may be submitted to the Owner's Representative via email. Files larger than 20MB shall be submitted by means of an FTP server or other method approved by the Owner's Representative. Pages shall be scanned at a resolution necessary for legibility. Scans shall be in color where necessary for clarity. Hard copies shall be submitted upon request and at no additional cost. Clearly indicate the specification section and drawing number to which each shop drawing is referenced.
- D. If the Contractor submits shop drawings of equipment by manufacturers other than those listed in the specifications, provide the following information with the submittal:
 - 1. The name and address of at least three (3) companies or agencies that are currently using the equipment.
 - 2. The name and telephone number of at least one (1) person at each of the above companies or agencies whom the Owner's Representative may contact.
 - 3. A description of the equipment that was installed at the above locations. The description shall be in sufficient detail to allow the Owner's Representative to compare it with the equipment that is proposed to be installed in this project.
- E. For materials originating outside of the United States for which tests are required, provide recertification and retesting by an independent domestic testing laboratory.

1.02 SUBMITTAL REQUIREMENTS

- A. Make submittals promptly in such sequence as to cause no delay in the work. Schedule submission a minimum of 30 calendar days before reviewed submittals will be needed.
- B. Submittals shall contain:
 - 1. The date of submission and the dates of any previous submissions.
 - 2. The project title and number.
 - 3. Contract identification.

4. The names of:
 - a. Contractor.
 - b. Supplier.
 - c. Manufacturer.
5. Identification of the product, with the specification section number.
6. Field dimensions, clearly identified as such.
7. Relationship to adjacent or critical features of the work or materials.
8. Identification of deviations from contract documents.
9. Identification of revisions on resubmittals.
10. Contractor's stamp, initialed or signed, shall certify Contractor's review of submittal, verification of products, field measurements and field construction criteria, and coordination of the information within the submittal that the product meets the requirements of the work and of the contract documents.

1.03 SUBMITTAL FORMAT

- A. Each submittal shall have a transmittal form. Every page in a submittal shall be numbered in sequence. Each copy of a submittal shall be collated and stapled or bound, as appropriate. Copies not collated will be rejected.
- B. Where product data from a manufacturer is submitted, clearly mark which model is proposed, with all pertinent data, capacities, dimensions, clearances, diagrams, controls, connections, anchorage, and supports. Present a sufficient level of detail for assessment of compliance with the contract documents.
- C. Each submittal shall be assigned a unique number. Submittals shall be numbered sequentially. The submittal numbers shall be clearly noted on the transmittal. Original submittals shall be assigned a numeric submittal number. Resubmittals shall bear an alphanumeric system which consists of the number assigned to the original submittal for that item followed by a letter of the alphabet to represent that it is a subsequent submittal of the original. For example, if Submittal 25 requires a resubmittal, the first resubmittal will bear the designation "25-A" and the second resubmittal will bear the designation "25-B" and so on.
- D. Disorganized submittals that do not meet the requirements above will be returned without review.

1.04 RESUBMITTALS

- A. Resubmittal of submittals will be reviewed and returned in the same review period as for the original submittal. It is considered reasonable that the Contractor shall make a complete and acceptable submittal by the second submission of a submittal item. The Owner's Representative reserves the right to withhold monies due to the Contractor to cover additional costs of any review beyond the second submittal.

1.05 CONTRACTOR'S JOBSITE DRAWINGS

- A. Provide and maintain on the jobsite one complete set of prints of all drawings which form a part of the contract. Immediately after each portion of the work is installed, indicate all deviations from the original design shown in the drawings either by additional sketches or ink thereon. Upon completion of the job, deliver this record set to the Owner's Representative.

PART 2 - MATERIALS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

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SECTION 015526 TRAFFIC REGULATION

PART 1 - GENERAL

1.01 DESCRIPTION

- A. This section describes procedures for traffic regulation and temporary steel plate bridging during construction in public streets and highways.

1.02 STANDARD SPECIFICATIONS

- A. Wherever reference is made to the State Specifications and Plans, such reference shall mean the State of California, Business, Transportation, and Housing Agency, Department of Transportation 2025 edition Standard Specifications and Standard Plans.

1.03 SUBMITTALS

- A. The Contractor shall submit a traffic control plan to the County of San Luis Obispo for approval and issuance of encroachment permits. Preparation of any additional traffic control plans or detail that may be required by the County of San Luis Obispo during the course of the work shall be the Contractor's responsibility. No work shall begin involving or requiring alternate traffic control until a traffic control plan is approved by the County.

1.04 GENERAL

- A. Provide safe and continuous passage for pedestrian and vehicular traffic at all times.
- B. Control traffic at those locations indicated and in conformance with the approved traffic control plans and specifications.
- C. Furnish, construct, maintain, and remove detours, road closures, traffic signal equipment, lights, signs, barricades, fences, K-rail, flares, solar-powered flashing arrow signs, miscellaneous traffic devices, flagmen, drainage facilities, paving, and such other items and services as are necessary to adequately safeguard the public from hazard and inconvenience. All such work shall comply with the ordinances, directives, and regulations of authorities with jurisdiction over the public roads in which the construction takes place and over which detoured traffic is routed by the Contractor. After devices have been installed, maintain and keep them in good repair and working order until no longer required. Replace such devices that are lost or damaged, to such an extent as to require replacement, regardless of the cause of such loss or damage.
- D. Prior to the start of construction operations, notify the police and fire department in whose jurisdiction the project lies a minimum of 72 hours in advance. Give the expected starting date, completion date, and the names and telephone numbers of two responsible persons who may be contacted at any hour in the event of a condition requiring immediate emergency service to remove, install, relocate, and maintain warning devices. In the event

these persons do not promptly respond or the authority deems it necessary to call out other forces to accomplish emergency service, the Contractor will be held responsible for the cost of such emergency service.

- E. Contractor to notify all impacted residents of any detours a minimum of 72 hours in advance.
- F. Post temporary "No Parking - Tow Away" signs 72 hours prior to work in areas where parking is normally permitted. The San Luis Obispo County's Sheriff's Department shall be notified 48 hours prior to the posting of any temporary parking restrictions along the pipeline route.
- G. Coordinate the relocation of public bus and school bus routes, bus stops, and trash collection services with the agencies listed on the plans in advance of construction activity.

1.05 TRAFFIC CONTROL DEVICES AND SIGNS

- A. Traffic control devices and temporary striping shall conform to the Manual of Uniform Traffic Control Devices (MUTCD). Construction signs shall conform to the latest edition of the State of California Sign Specification Sheets.
- B. The placement of construction signing, striping, barricades, and other traffic control devices used for handling traffic and public convenience shall conform to the California MUTCD and the County of San Luis Obispo Standard Plans. In case of discrepancy, the County of San Luis Obispo's Standard Plan takes precedence over the California MUTCD.
- C. Signs shall be illuminated or reflectorized when they are used during hours of darkness. Cones and portable delineators used for night lane closures shall have reflective sleeves. Equip barricades used in the diversion of traffic with flashers if in place during hours of darkness.
- D. During the duration of a detour, cover existing signs not in accordance with the traffic control plan. Relocate existing signs that are in force to provide visibility from all relocated traffic lanes.
- E. Work performed in the County right-of-way shall be designed and constructed to provide a 10-foot wide area beside the edge of traveled way that is clear of any obstructions in which no above grade unyielding fixed objects shall be constructed unless otherwise stated by the County of San Luis Obispo.

1.06 TEMPORARY STEEL PLATE BRIDGING

- A. When backfilling operations of an excavation in the traveled way, whether transverse or longitudinal, cannot be properly completed within a workday, provide steel plate bridging with a nonskid surface and shoring to preserve unobstructed traffic flow. In such cases, the following conditions shall apply:

1. Steel plates used for bridging shall extend a minimum of 12 inches beyond the edges of the trench.
 2. Install steel plate bridging to operate with minimum noise.
 3. Shore the trench to support the bridging and traffic loads.
 4. Use temporary paving with cold asphalt concrete to feather the edges of the plates if plate installation by Method 2 is used.
 5. Secure bridging against displacement by using adjustable cleats, shims, or other devices.
- B. Install steel plate bridging and shoring using either Method 1 or 2:
1. Method 1 (For Speeds More Than 45 mph): The pavement shall be cold planed to a depth equal to the thickness of the plate and to a width and length equal to the dimensions of the plate.
 2. Method 2 (For Speeds 45 mph or Less): Attach approach plate(s) and ending plate (if longitudinal placement) to the roadway by a minimum of two dowels predrilled into the corners of the plate and drilled 2 inches into the pavement. Butt subsequent plates to each other. Compact fine graded asphalt concrete to form ramps, maximum slope 8.5% with a minimum 12-inch taper to cover all edges of the steel plates. When steel plates are removed, backfill the dowel holes in the pavement with either graded fines of asphalt concrete mix or concrete slurry.
- C. Maintain the steel plates, shoring, and asphalt concrete ramps.
- D. The following table shows the required thickness of steel plate bridging required for a given trench width:

Trench Width (feet)	Minimum Plate Thickness (inches)
1	1/2
1 1/2	3/4
2	7/8
3	1
4	1 1/4

- E. For spans greater than 4 feet, prepare a structural design by a registered civil engineer and submit to the Owner's Representative for review.
- F. Design steel plate bridging for HS20-44 truck loading per Caltrans Bridge Design Specifications Manual. Maintain on the steel plate a nonskid surface having a minimum coefficient of friction equivalent to 0.35 as determined by California Test Method No. 342.

The Contractor may use standard steel plate with known coefficient of friction equal to or exceeding 0.35.

- G. Use a "Steel Plate Ahead" sign (W8-) with black lettering on an orange background in advanced of steel plate bridging. This is to be used along with any other required construction signing.

1.07 PEDESTRIAN TRAFFIC CONTROL

- A. Pedestrian protection devices shall be constructed and maintained in accordance with the CA-MUTCD and the CBC where applicable.
- B. Maintain and delineate a minimum of one 4-foot-wide pedestrian walkway along each public street at all times during construction. Maintain existing pedestrian accesses at intersections at all times. When existing crosswalks are blocked by construction activity, install signs directing pedestrian traffic to the nearest alternative crosswalk.
- C. Erect a fence or provide other means of securement to preclude unauthorized entry to any excavation during all nonworking hours on a 24-hour basis including weekends and holidays. Said fence shall be a minimum of 7 feet high around the entire excavation, consisting of a minimum 9-gauge chain-link type fence fabric and shall be sturdy enough to prohibit toppling by children or adults. There shall be no openings under the wire large enough for any child to crawl through. Lock any gates if no adult is in attendance. Place warning signs spaced on 50-foot centers on the outside of the fence with the statement "DEEP HOLE DANGER."

1.08 ACCESS TO ADJACENT PROPERTIES

- A. Maintain reasonable access from public streets to adjacent properties at all times during construction. Prior to restricting normal access from public streets to adjacent properties, notify each property owner or responsible person, informing him of the nature of the access restriction, the approximate duration of the restriction, and the best alternate access route for that particular property.

1.09 PERMANENT TRAFFIC CONTROL DEVICES

- A. Existing permanent traffic control signs, barricades, and devices shall remain in effective operation unless a substitute operation is arranged for and approved as a portion of vehicular traffic control above.
- B. Restriping of Streets: Permanent restriping shall be in accordance with the requirements of the authority having jurisdiction. Place and remove temporary striping required for traffic control during construction by sandblasting. Temporary striping includes any striping required on any pavement replaced prior to the final surface course. Replace any damaged or obliterated raised pavement markers in accordance with the standards of the agency having jurisdiction.

PART 2 - MATERIALS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

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SECTION 015800 TEMPORARY SEWAGE BYPASS PUMPING

PART 1 - GENERAL

1.01 DESCRIPTION

- A. This specification covers work and equipment required for temporarily diverting sewage around work areas or interrupting flow for a short duration during tie-ins of gravity sewer. Bypass pumping includes furnishing, installing, operating and maintaining all power, primary and standby pumps, appurtenances, bypass piping, and all the tools, labor, supervision, materials, and equipment necessary to maintain existing sewer flows and services and conforming with the Contractor's submitted Bypass Pumping Plan and Spill Prevention Control and Countermeasure Plan. The Contractor shall schedule work to minimize service outages.
- B. The Contractor may perform short duration shutdowns during gravity sewer point repairs. Performing Short Duration Shutdowns includes furnishing, installing, operating and maintaining all power, standby pumps, appurtenances, standby piping, and all the tools, labor, supervision, materials, and equipment necessary to conform to the Contractor's submitted Short Duration Shutdown Plan and Spill Prevention Control and Countermeasure Plan. In addition to submitting the shutdown plan(s), the Contractor shall provide a minimum of 72 hours notice prior to the actual need for sewer shutdowns. The Contractor shall schedule work to minimize service outages.
- C. Should the Contractor determine that extended duration sewage bypass pumping is required to complete the project; the Contractor shall conform to the requirements contained herein.

1.02 SUBMITTALS

- A. Submit a Bypass Pumping Plan and/or a Change Over Plan and Short Duration Shutdown Plan depending on the Contractor's plan of action.

1. Bypass Pumping Plan

- a. Submit a Bypass Pumping Plan prepared by a licensed California Professional Engineer to the Owner's Representative for review a minimum of 10 working days prior to any planned bypass. The Owner's permission shall be obtained prior to bypass pumping. The Bypass Pumping Plan shall consist of the following information, at a minimum, for each bypass pumping setup:
 - (1) Sequence of sewage flow interruption, bypass, and tie-ins.
 - (2) Plans indicating the location of temporary bypass discharge lines.

- (3) Drawings shall clearly indicate the proposed manhole-to-manhole pumping sequence and shall be coordinated with the Contractor's traffic control/regulation plans.
- (4) Capacities of pumps, prime movers, and standby equipment. A completely redundant bypass system is required including pumps and appurtenances.
- (5) Design calculations proving adequacy of the system and selected equipment. This is to include any flow metering data collected, method used to establish design flows, and design flows used for sewer bypass system sizing.
- (6) Pump make, model, pump curve, design head (TDH) calculations, horsepower requirement, and noise rating.
- (7) Sewage bypass pipe material, fitting types, and details on necessary appurtenances, including pipe plugs.
- (8) Description of pump system controls and alarms.
- (9) Generator capacity, fuel requirements, tank size and specifications (if a generator is used). Backup fuel and fuel capacity of internal combustion engines.
- (10) Plans showing details of proposed method of temporary handling of sewage flow, routing of bypass lines, containment areas, equipment location, schematic of pump set-up and discharge, proposed sequencing, and public relations procedures.
- (11) Electrical, controls, and instrumentation.
- (12) Spill Prevention, control, and countermeasure plan.
- (13) Monitoring Plan and bypass checklist in accordance with Part 3.01F.
- (14) Name and phone number (including emergency contact info) for person responsible for temporary service.
- (15) Decommissioning of bypass including cleaning of plugged lines.

2. Short Duration Shutdown Plan

- a. Submit a Short Duration Shutdown Plan to the District for review a minimum of 10 working days prior to any planned shutdowns. The District's permission shall be obtained prior to any shutdowns. The short duration shutdown plan shall consist of the following information, at a minimum, for each setup:

- (1) Sequence of flow interruption and construction of tie-ins, including new piping and structures.
 - (2) Location and duration of planned short duration shutdowns.
 - (3) Plans indicating the location of temporary sewer plugs, standby pump(s), discharge lines and other standby equipment.
 - (4) Capacities of pumps and standby equipment.
 - (5) Checklist for equipment, material, and manpower required to complete the tie-in in a timely fashion in conformance with the plans and specifications. All equipment, material and manpower shall be on-site and ready prior to initiating the sewer shutdown. The Contractor shall also have backup equipment and material on hand and shall be prepared to pursue the completion of the tie-in in an efficient diligent and timely manner.
 - (6) Spill Prevention, Control, and Countermeasure Plan.
- B. Notify the County of San Luis Obispo 24 hours prior to initial start of work within the County right-of way.

1.03 JOB CONDITIONS

- A. Extended Duration Bypass Pumping should not be required.
- B. Schedule the order of work to minimize bypass pumping and/or shutdown durations.
- C. Estimated Flow Conditions

Location	Estimated Average Day Flow (gpm)	Estimated Peak Hour Flow (gpm)
Belridge Street (Station 1+00 to 3+61)	36	60
Wilmar Avenue (Station 4+25)	60	250

PART 2 - MATERIALS

2.01 PUMPING EQUIPMENT

- A. Engines shall be muffled in such a manner that the maximum noise level will not exceed 75 dBA at a distance of eight feet from motors between the hours of 7:00 AM and 10:00 PM. Contractor shall obtain an exemption permit if equipment is to be operated between

the hours of 10:00 PM and 7:00 AM and shall implement sound damping measures to achieve a maximum noise level of 65 dBA at a distance of 8 feet from the motors. Contractor is responsible for providing necessary power for standby pumps. A redundant power source is required so that there is no interruption of flow. Redundant standby pumping equipment shall be at the site continuously during bypass pumping or short duration shutdowns to provide a 100 percent redundant system. The standby pumps shall be connected to piping such that if the bypass duty pump fails or if interrupted sewage accumulates beyond an acceptable level, the standby pump can be online immediately. When bypassing flows, have one (1) person available to respond to the site within 30 minutes, 24 hours per day, with bypass monitored by remote telemetry that immediately notifies Contractor's personnel and the District of an emergency.

2.02 BYPASS PIPING

- A. Bypass piping shall be aluminum, galvanized steel, or fusion-welded solid wall HDPE.

PART 3 - EXECUTION

3.01 SEWER BYPASSING

- A. Sewer bypassing shall be accomplished by pumping or diverting the upstream flow around the work.
- B. Provide temporary pumps, galvanized, or aluminum bypass pipe, and all other equipment required to bypass sewer flows. Furnish the necessary labor, tools, equipment, and supervision to set up, operate, and monitor the pumping and bypass system. Pumps and bypass lines shall be of adequate capacity and size to handle projected flows. All bypassed flow shall be discharged into a downstream manhole. Pumps and entire bypass line shall have a sandbag berm to act as a temporary containment area.
- C. Under no circumstances shall sewage or solids be deposited onto the ground surface, streets, or into unlined ditches, catch basins, storm drains or natural drainage ways. Sewage shall be handled in a manner so as not to create a public nuisance or health hazard. Storm drain inlets in the vicinity of the bypass shall be sandbagged prior to and during bypass pumping.
- D. Maintain continuity of sanitary sewer service during the execution of the work. In the event that sewage backup occurs during Contractor bypass pumping and enters dwellings or other structures, the Contractor shall cleanup, repair, pay property damage costs, pay fines imposed by jurisdictional authorities, and handle all claims arising therefrom. All spills shall be contained and returned to the sewer system.
- E. Provide a designated employee(s) whose only role in the construction effort is to be responsible for continuously monitoring (24 hours a day) the bypassing operation, and all related equipment. The designated employee(s) will not be allowed to participate in any other unrelated undertaking, while the bypassing operation is in effect. Provide a remote

telemetry system that immediately notifies Contractor's personnel and District staff of an emergency.

- F. Complete a bypass checklist prior to bypassing operation. The checklist will demonstrate the step-by-step inspection of the pumps, pipes, hold-down cables, plugs, and other equipment or appurtenances that will be used in the operation. The designated employee shall sign the checklist after completing the inspection.

3.02 STANDBY EQUIPMENT

- A. Maintain sufficient equipment and materials on site to ensure continuous and successful operation of the bypass and dewatering systems. Standby pumps shall be fueled and operational at all times. Maintain a sufficient number of valves, tees, elbows, connections, tools, sewer plugs, piping, and other parts or system hardware on site to ensure immediate repair or modification of any part of the system as necessary.

3.03 SPILL PREVENTION, CONTROL AND COUNTERMEASURE PLAN

- A. Prepare, submit and carry out a Spill Prevention, Control and Countermeasure Plan that incorporates the following:
 - 1. Include or reference in the plan materials provided as submittals per Part 1.02 above.
 - 2. Provide in the plan a description of all emergency equipment for bypassing flow, containment, cleanup, and repair of any damage. Specifics shall include as applicable, but are not limited to:
 - a. Pipe patch kits
 - b. Sandbags
 - c. Rubber matting
 - d. Bypass pipes, pumps, and other relevant equipment
 - e. Extra pumps
 - f. Secondary containment in trench or other surrounding land relief
 - 3. Maintain equipment on site.
 - 4. Provide the District with at least three (3) people who can be contacted 24 hours per day by phone to address on site emergencies. Provide the daily schedule with names, phone numbers, and hourly working schedules of persons that may be brought on site any time. Provide notification of any substitution in writing at least two (2) working days in advance. When bypassing flows, have one (1) person available to respond to the site within 30 minutes, 24 hours per day, with bypass monitored by

remote telemetry that immediately notifies Contractor's personnel and the District of an emergency.

5. Describe the method used to protect storm drains during construction on the plan. The description shall include where the storm drains are located (simple map of sewer pipe, storm drains, waterways, and any relief features) and information that would assist in containing the spill. The plan shall describe how storm drains will be blocked in the event of a spill (what material, who will do it, how long will it take). Describe any other response-related plans (bypass pumping set ups, etc.).
6. Coordinate the plan to protect water quality and respond to spills of sewage, groundwater, or fuels. Describe all spill prevention measures (e.g. monitoring of upstream manholes, monitoring in the trench).
7. In general, good housekeeping is required so no contamination reaches surface waters or storm drains when it rains. Some specifics include, but are not limited to:
 - a. Prior to start of bypassing, all storm drain catch basins that are within the vicinity of the work that could possibly take in sewage, in the event of a spill, shall be isolated with sandbags or other approved means.
 - b. Oil pans should be under any engine that leaks oil.
 - c. Spill response as covered below.
8. The following spill procedures shall be incorporated into the plan in anticipation of the described failure mode, and the Contractor shall be prepared to act accordingly. If a spill is detected or a catastrophic pipe failure occurs, the immediate priority shall be to prevent any sewage from reaching surface waters and storm drains. Immediately protect all drains using rubber mats or sandbags (have sandbags on site).
 - a. When excavating and moderate leaks are discovered in the existing pipe, make coupling/clamp repairs as soon as possible to minimize sewage flow into the trench. If the leak is too large to make fast coupling repair, start bypassing (see bypassing sequence below), then make repair.
 - (1) In case of catastrophic leak, immediately start the bypassing sequence:
 - (2) Plug upstream side of manhole upstream of a catastrophic leak.
 - (3) Insert bypass pump into manhole upstream of plugged manhole. The pump shall be sized to handle peak flow of existing sewer. Provide spare pump or set up standby pump availability with rental yard.
 - (4) Connect hose from pump to discharge point. (NOTE: Hose shall already be in place and connected to a downstream discharge point at all times when working near or with live sewers.)

- (5) In event of any spill, immediately and in parallel with above activities, notify the District and request the District's wastewater staff to be dispatched. Give the best indication of the approximate size of the spill (<1,000 gallons is small; 1,000 gallons to 10,000 gallons is medium; and >10,000 gallons is large) to the District's staff so they can dispatch the appropriate response. District's staff will assist in the response and ensure that the spill is cleaned to the District's standards.
- (6) While awaiting the District's wastewater staff response, pond the water in an area that can be easily and fully recovered for discharge to the South San Luis Obispo County Sanitation District's WWTP. This ponding activity should not impact any environmentally sensitive areas.
- (7) When District's staff and any other responding staff arrive onsite, a more permanent and planned response, repair, and cleanup will ensue. Cooperate with the District to the fullest extent possible in order to minimize the impacts and volume of the spill in the most efficient manner possible.
- (8) No form of disinfection is allowed. All wash water must be contained and recovered as the sewage is.
- (9) Clean up may require a sweeper truck or other equipment. All District costs, time and materials, and special equipment for spill cleaning will be deducted from the Contractor's progress payment.
- (10) In the event of a spill, be prepared to document the spill with a video camera and photographs. Plan on attending a debriefing immediately after the spill is contained and cleaned up.

9. Comply with the Regional Water Quality Control Board, San Luis Obispo County Health Department, and District Standards. Cooperate with District's staff and other regulators and environmental agencies.

3.04 DAMAGES

- A. Without cost to the District, repair any damage that may result from the installation, operation, maintenance, and removal of the sewer bypass pumping system or short duration shutdown system. This includes but is not limited to damages resulting from inadequate or improper installation, operation and maintenance of the bypass or interruption system components, mechanical failures, or electrical failures.
 1. If District staff is called on to assist, the Contractor shall pay for all costs incurred by the District in assisting the Contractor.

END OF SECTION

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SECTION 017410 CLEANING DURING CONSTRUCTION AND FINAL CLEANING

PART 1 - GENERAL

1.01 GENERAL

- A. This section includes cleaning during construction and final cleaning on completion of the work.
- B. At all times maintain areas covered by the contract and adjacent properties and public access roads free from accumulations of waste, debris, and rubbish caused by construction operations.
- C. Conduct cleaning and disposal operations to comply with local ordinances and antipollution laws. Do not burn or bury rubbish or waste materials on project site. Do not dispose of volatile wastes, such as mineral spirits, oil, or paint thinner, in storm or sanitary drains. Do not dispose of wastes into streams or waterways.
- D. Use only cleaning materials recommended by manufacturer of surface to be cleaned.

1.02 CLEANING DURING CONSTRUCTION

- A. During execution of work, clean site, adjacent properties, and public access roads and dispose of waste materials, debris, and rubbish to assure that buildings, grounds, and public properties are maintained free from accumulations of waste materials and rubbish.
- B. Wet down dry materials and rubbish to lay dust and prevent blowing dust.
- C. Provide containers for collection and disposal of waste materials, debris, and rubbish.
- D. Cover or wet excavated material leaving and arriving at the site to prevent blowing dust. Clean the public access roads to the site of any material falling from the haul trucks.

1.03 FINAL CLEANING

- A. At the completion of work and immediately prior to final inspection, clean the entire project site as follows.
- B. Clean, sweep, wash, and polish all work and equipment including finishes.
- C. Remove grease, dust, dirt, stains, labels, fingerprints, and other foreign materials from sight-exposed interior and exterior finished surfaces.
- D. Repair, patch, and touch up marred surfaces to match adjacent surfaces.
- E. Broom clean paved surfaces; rake clean landscaped areas.

- F. Remove from the site temporary structures and materials, equipment, and appurtenances not required as a part of, or appurtenant to, the completed work.

PART 2 - MATERIALS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

SECTION 020120 PROTECTING EXISTING UNDERGROUND UTILITIES

PART 1 - GENERAL

1.01 DESCRIPTION

- A. This section includes materials and procedures for protecting existing underground utilities.

1.02 RELATED WORK SPECIFIED ELSEWHERE

- A. Trenching, Backfilling, and Compacting: Section 312316.
- B. Subsurface Utility Locating (Potholing): Section 023219.

PART 2 - MATERIALS

2.01 REPLACEMENT IN KIND

- A. Except as indicated below or as specifically authorized by the Owner's Representative, reconstruct utilities with new material of the same size, type, and quality as that removed.

2.02 SDR 35 PVC SEWER PIPE AND COUPLINGS

- A. For sewer pipe 8 inches and less in diameter, replacement shall consist of plain-end SDR35 PVC pipe conforming to ASTM D3034 and Section 333112. Compression couplings shall be Maxadaptor by Gripper Gasket or approved equal. Use only one section of pipe in crossing the trench section.

PART 3 - EXECUTION

3.01 GENERAL

- A. Replace in kind street improvements, such as curbs and gutters, barricades, traffic islands, signalization, fences, signs, etc., that are cut, removed, damaged, or otherwise disturbed by the construction.
- B. Where utilities are parallel to or cross the construction but do not conflict with the permanent work to be constructed, follow the procedures given. Notify the utility owner 48 hours in advance of the crossing construction and coordinate the construction schedule with the utility owner's requirements. For utility crossings not shown in the drawings, refer to the General Conditions and the instructions of the Owner's Representative for guidance.
- C. Determine the true location and depth of utilities and service connections which may be affected by or affect the work. Determine the type, material, and condition of these

utilities. In order to provide sufficient lead-time to resolve unforeseen conflicts, order materials and take appropriate measures to ensure that there is no delay in work.

3.02 PROCEDURES

- A. Protect in Place: Protect utilities in place, unless abandoned, and maintain the utility in service, unless otherwise specified in the drawings or in the specifications.
- B. Cut and Plug Ends: Cut abandoned utility lines and plug the ends. Plug storm drains and sewers with an 8-inch wall of brick and mortar. Cap waterlines with a cast-iron cap or install a 3-foot-long concrete plug. Dispose of the cut pipe as unsuitable material.
- C. Remove and Reconstruct: Where so indicated in the drawings or as required by the Owner's Representative, remove the utility and, after passage, reconstruct it with new materials. Provide temporary service for the disconnected utility.

3.03 COMPACTION

- A. Utilities Protected in Place: Backfill and compact under and around the utility so that no voids are left.
- B. Utilities Reconstructed: Prior to replacement of the utility, backfill the trench and compact to an elevation 1 foot above the top of the ends of the utility. Excavate a cross trench of the proper width for the utility and lay, backfill, and compact.
- C. Alternative Construction – Sand-Cement Slurry: Sand-cement slurry consisting of two sack (188 pounds) of portland cement per cubic yard of sand and sufficient moisture for workability may be substituted for other backfill materials to aid in reducing compaction difficulties. Submit specific methods and procedures for the review and approval by the Owner's Representative prior to construction.

3.04 THRUST BLOCKS ON WATERLINES

- A. The Contractor's attention is called to thrust blocks for waterlines throughout the project whose thrust is in the direction of the new excavation and, therefore, may be affected by the construction. These waterlines are owned and operated by the Owner. Protect thrust blocks in place or shore to resist the thrust by a means approved by the Owner's water division superintendent and reconstruct. If the thrust blocks are exposed or rendered to be ineffective in the opinion of the Owner's Representative, reconstruct them to bear against firm unexcavated or backfill material.
- B. Provide firm support by backfilling that portion of the trench for a distance of 2 feet on each side of the thrust block to be reconstructed from the pipe bedding to the pavement subgrade, with either:
 - 1. Two-sack sand cement-cement slurry (188 pounds of cement per cubic yard).
 - 2. The native material compacted to a relative compaction of 95%.

- C. Then excavate the backfill material for construction of the thrust block.
- D. Test compaction of the backfill material before pouring any concrete thrust block. Use Class B Concrete, per District standards for reconstruction.

END OF SECTION

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SECTION 023219 SUBSURFACE UTILITY LOCATING (POTHOLING)

PART 1 - GENERAL

1.01 DESCRIPTION

- A. This section includes materials and procedures for performing pothole operations to locate existing underground utilities.

1.02 SUBMITTALS

- A. Submit pothole locations at least ten (10) working days prior to the commencement of field activities.
- B. Submit a traffic control plan per Section 015526.
- C. Submit proposed method of potholing, including description of equipment to be used, and schedule for potholing for approval at least seven (7) calendar days prior to the commencement of field activities. Obtain Owner's approval of pothole locations prior to commencement of field activities.
- D. Submit field logs to the Owner within two (2) working days after the completion of pothole excavations in each area. Include dates of potholing operations and any additional discovered information or pertinent data. Include for each pothole excavation field log:
 - 1. Pothole number.
 - 2. Date of pothole.
 - 3. Depths to top and bottom of utility (measured from existing grade over utility at pothole).
 - 4. Miscellaneous Contractor's notes.
- E. Submit temporary steel cap and/or steel plate bridging shop drawings at least seven (7) calendar days prior to the commencement of field activities.
- F. Submit sand-cement slurry mix design at least seven (7) calendar days prior to the commencement of field activities.
- G. Submit asphalt concrete mix design at least seven (7) calendar days prior to the commencement of field activities.

1.03 PROCEDURES

- A. Subsurface utility locating (potholing) services shall conform to CI/ASCE 38-22. For the purpose of this scope, "locate" means to obtain the horizontal and vertical position of the

utility line by excavating a circular test hole or narrow trench (where approved of and/or requested by the Owner). Construct test holes using vacuum excavation or comparable nondestructive equipment in a manner that will cause no damage to the utility.

- B. Subsurface utility locating shall consist of test hole excavations at locations indicated on the pothole plans as approved by the Owner. Narrow trench excavations (slot potholes) may be required at locations approved by the Owner or to locate multiple parallel utilities.

1.04 STANDARD SPECIFICATIONS

- A. Wherever reference is made to the State Specifications such reference shall mean the State of California, Business, Transportation, and Housing Agency, Department of Transportation Standard Specifications, current edition.

PART 2 - MATERIALS

2.01 SAND-CEMENT SLURRY BACKFILL AT TEST HOLES AND AT EXPLORATORY TRENCHES

- A. Sand-cement slurry backfill shall consist of two sacks of Type I or II portland cement added per cubic yard of imported sand and sufficient water for workability.

2.02 ASPHALT CONCRETE PAVEMENT REPAIR AT EXPLORATORY TRENCHES AND AT TEST HOLES

- A. Asphalt concrete paving shall conform to the final County of San Luis Obispo Encroachment permit. In the event of a conflict between the County Encroachment permit and these specifications, the County Encroachment permit shall take precedence.
- B. Paving thickness shall match existing plus 1 inch.

PART 3 - EXECUTION

3.01 POTHOLING OPERATIONS

- A. Backfill and repair test hole excavations immediately after obtaining the measurement data. Backfill and repair trench excavations requiring use of temporary steel plate bridging within four working days. Advise Owner of number of pothole excavations completed and number remaining.
- B. Underground Service Alert Requirements: Comply with Underground Service Alert requirements for notification prior to excavation. Contact Underground Service Alert at 1-800-642-2444 (or dial 811) no less than two (2) and no more than ten (10) days prior to the start of exploratory excavation. Verify whether or not a representative of each utility or agency will be present during excavation, and coordinate with said individual(s). Take any precautions required by the utility owner.

- C. Conduct potholing operations in a manner that minimizes the damage potential to existing underground utilities in order to ensure that the existing facilities will remain in operation without interruption.
- D. Pothole excavations shall sufficiently expose subsurface utilities to easily determine and measure the following data:
 - 1. Elevation at top and bottom of utility.
 - 2. Elevation of existing grade over utility at pothole.
 - 3. Coordinates at surface.
 - 4. Outside diameter of utility or width of duct banks.
 - 5. Utility material and condition.

The electronic survey data shall include Pothole number, coordinated with the excavation field log.

- E. Location and Depiction of Existing Utilities: Pothole maps for subsurface utility locating shall be present and utilized during potholing activities. The plans shall be compared to utility/agency paint markings following Underground Service Alert notification as well as locations premarked by the Owner. If discrepancies are found between the plans and paint markings, promptly notify the Owner prior to commencement of any excavation

3.02 TRAFFIC CONTROL

- A. Furnish, install, maintain, and remove necessary traffic signs, barricades, lights, signals, cones, pavement markings, and other traffic control devices. Perform traffic control in accordance with Section 015526 and OSHA Regulations for Construction Projects.

3.03 EXCAVATION

- A. Protect utilities or underground structures from damage during potholing. Immediately report any damaged utilities to the affected utility's owner and the Owner. Repair immediately any damaged utilities in accordance with the respective utility owner's requirements. Neatly cut and remove existing pavement. Excavate test holes in such a manner as to prevent any damage to wrappings, coatings, or other protective coverings, utilizing vacuum excavation or hand digging.
- B. Methods: Backhoe excavation is not permitted except for trench excavations. Use the following methods for pothole excavations:
 - 1. Hand Digging: Hand digging is the method of excavating a pothole by manual means with hand-held, nonmechanical equipment such as a shovel.

2. Vacuum Excavation: Vacuum excavation shall consist of air or water pressure to break up the soil and a vacuum device to collect the spoil. Determine if air or water vacuum excavation shall be used depending upon specific site and environmental characteristics. Soil type such as heavy clay may require water vacuum excavation. Utilize air vacuum excavators if mud from water vacuum excavators cannot be disposed properly. Use air vacuum excavators if damage to utilities, such as cutting through cables, will occur with the use of water vacuum excavators.

- a. Air: Air vacuum excavators shall utilize a high velocity air stream to penetrate, expand, and break up the soil. Remove the loosened particles of soil and rock from the excavation through the use of a vacuum.
- b. Water: Water vacuum excavation systems shall excavate the pothole using high-pressure water to reduce and loosen the soil. Remove the wet soil and mud slurry to a spoil tank using a vacuum.

C. Size of Test Hole Excavation: Maximum test hole size shall be 8 inches in diameter at surface, unless indicated otherwise by Owner.

D. Size of Exploratory Trench Excavation: Trench width and length shall be as approved by the Owner. Trench depth shall be as required to accurately locate subsurface utilities.

3.04 TEMPORARY STEEL PLATE BRIDGING, WITH A NONSKID SURFACE (WHERE REQUIRED FOR APPROVED TRENCHES)

A. Provide steel plate bridging with a nonskid surface and shoring to preserve unobstructed traffic flow. In such cases, the following conditions shall apply:

1. Steel plates used for bridging shall extend a minimum of 12 inches beyond the edges of the trench.
2. Install steel plate bridging to operate with minimum noise.
3. Shore the trench to support the bridging and traffic loads.
4. Use temporary paving with cold asphalt concrete to feather the edges of the plates if plate installation by Method 2 is used.
5. Secure bridging against displacement by using adjustable cleats, shims, or other devices.

B. Install steel plate bridging and shoring using the following method:

- a. Attach approach plate(s) and ending plate (if longitudinal placement) to the roadway by a minimum of two dowels predrilled into the corners of the plate and drilled 2 inches into the pavement. Butt subsequent plates to each other. Compact fine graded asphalt concrete to form ramps, maximum slope 8.5% with a minimum 12-inch taper to cover all edges of the steel plates. When

steel plates are removed, backfill the dowel holes in the pavement with either graded fines of asphalt concrete mix or concrete slurry.

- C. Maintain the steel plates, shoring, and asphalt concrete ramps.
- D. Unless specified, use of steel plate bridging at any given location shall not exceed four consecutive working days in any given week. Cover backfilling of excavation with a minimum of 3 inches of temporary layer of cold mix asphalt concrete.
- E. The following table shows the required minimal thickness of steel plate bridging required for a given trench width:

Trench Width (feet)	Minimum Plate Thickness (inches)
1	1/2
1 1/2	3/4

- F. The Contractor may use standard steel plate with known coefficient of friction equal or exceeding 0.35.
- G. Use a “Steel Plate Ahead” sign (W8-24) with black lettering on an orange background in advanced of steel plate bridging. This is to be used along with any other required construction signing.

3.05 POTHOLE REPAIR

- A. After excavating a test hole or trench, provide and install a temporary steel cap (over test hole) or temporary steel plate bridging (over trench) to facilitate data gathering.
- B. Following data gathering, remove temporary steel caps and/or steel plate bridging, and backfill excavation with approved material as follows:
 - 1. Test Hole Excavations: Sand-cement slurry backfill per Part 2 of this section. Bring to grade with asphalt cement pavement per Part 2 of this section. Match existing pavement thickness plus 1 inch.
 - 2. Exploratory Trenches: Backfill per Part 2 of this section. Match existing pavement thickness plus 1 inch.
- C. The finished surface of the repair shall be of like material and constructed to the same finished grade as the adjacent pavement. The finished surface shall be such that it does not allow water to pond. There shall be no discernable difference in surface level at the joint between the existing pavement and the completed repair.

3.06 DISPOSAL OF CUTTINGS

- A. Dispose of cuttings off-site.

END OF SECTION

SECTION 312316 TRENCHING, BACKFILLING, AND COMPACTING

PART 1 - GENERAL

1.01 DESCRIPTION

- A. This section includes materials, testing, and installation for pipeline trench excavation, backfilling, and compacting.

1.02 RELATED WORK SPECIFIED ELSEWHERE

- A. Existing Conditions: General Conditions.
- B. Protecting Existing Underground Utilities: Section 020120.
- C. PVC Gravity Sewer Pipe: Section 333112.

1.03 SUBMITTALS

- A. Submit a copy of a report from a testing laboratory verifying that material conforms to the specified gradations or characteristics for pea gravel, granular material, imported sand, rock refill for foundation stabilization, and water.
- B. Submit method(s) of compaction including removal sequence of shoring where used.

1.04 TESTING FOR COMPACTION

- A. The Owner will test for compaction as described below:
 - 1. Determine laboratory moisture-density relations of soils by nuclear methods, ASTM D6938. Compaction tests will be performed for each lift or layer.
 - 2. Determine the relative density of cohesionless soils by ASTM D1557. Compaction test results for maximum dry density and optimum water content shall be adjusted in accordance with ASTM D4718. This will be required for determination of percent relative compaction and moisture variation from optimum.
 - 3. Determine the relative density of cohesionless soils by ASTM D4253 and D4254.
 - 4. Sample backfill materials per ASTM D75.
 - 5. "Relative compaction" is the ratio, expressed as a percentage, of the in-place dry density to the laboratory maximum dry density.
 - 6. Compaction shall be deemed to comply with the specifications when no more than one test of any three consecutive tests falls below the specified relative compaction. The one test shall be no more than three percentage points below the specified

compaction. The Contractor shall pay the costs for any retesting or additional testing of work not conforming to the specifications.

7. Where compaction tests indicate a failure to meet the specified compaction, the Owner will take additional tests every 25 feet in each direction until the extent of the failing area is identified. Rework the entire failed area until the specified compaction has been achieved.

1.05 PAVEMENT ZONE

- A. The pavement zone includes the asphalt concrete and aggregate base pavement section placed over the trench backfill.

1.06 STREET ZONE

- A. The street zone is the top 12 inches of the trench immediately below the pavement zone in paved areas. Where the depth of cover over the pipe does not permit the full specified thickness of the street zone, construct a thinner street zone, extending from the top of the pipe zone to the bottom of the pavement zone.

1.07 TRENCH ZONE

- A. The trench zone includes the portion of the trench from the top of the pipe zone to the bottom of the street zone in paved areas or to the existing surface in unpaved areas. If the resulting trench zone is less than 24 inches thick, the street zone shall extend to the top of the pipe zone and there shall be no separate trench zone.

1.08 PIPE AND PIPE BEDDING ZONE

- A. The pipe and pipe bedding zone shall include the full width of trench from 6 inches below the bottom of the pipe or conduit to a horizontal level 12-inches above the top of the pipe. Where multiple pipes or conduits are placed in the same trench, the pipe and pipe bedding zone shall extend from 6-inches below the bottom of the lowest pipe to a horizontal level above 12-inches above the top of the highest or topmost pipe.

PART 2 - MATERIALS

2.01 NATIVE EARTH BACKFILL – STREET AND TRENCH ZONES

- A. Native earth backfill used above the pipe zone shall be excavated fine-grained materials free from roots, debris, rocks larger than 3 inches, asbestos, organic matter, clods, clay balls, broken pavement, and other deleterious materials. At least 35% shall pass a No. 4 sieve. At least 20% shall pass a No. 30 sieve. The coarser materials shall be well distributed throughout the finer material.

2.02 IMPORTED SAND – PIPE ZONE AND PIPE BASE

- A. Imported sand used in the pipe zone or for the pipe base shall have the following gradation:

Sieve Size	Percent Passing By Weight
3/8 inch	100
No. 4	80 to 100
No. 30	12 to 50
No. 100	5 to 20
No. 200	0 to 10

- B. Imported sand shall have a minimum sand equivalent of 30 per ASTM D2419.

2.03 GRAVEL AND CRUSHED ROCK – PIPE ZONE AND PIPE BASE

- A. Gravel or crushed rock material shall meet the following gradation:

Sieve Sizes	Percent Passing by Weight
1 1/2 inches	100
1 inch	86 to 100
No. 4	0 to 16
No. 8	0 to 6

2.04 SAND-CEMENT SLURRY BACKFILL--TENCH AND STREET ZONE

- A. Sand-cement slurry backfill shall consist of two sack (188 pounds) of Type I or II portland cement added per cubic yard of imported sand and sufficient water for workability.

2.05 WATER FOR COMPACTION

- A. Water shall be free of organic materials injurious to the pipe coatings.

2.06 FILTER FABRIC

- A. Filter fabric shall conform to Section 96-1.02B of the California Department of Transportation Standard Specifications.
- B. Filter fabric for encapsulating drain rock or gravel shall be MIRAfi 140N, manufactured by Mirafi Inc., or approved equal.

PART 3 - EXECUTION

3.01 SLOPING, SHEETING, SHORING, AND BRACING OF TRENCHES

- A. Trenches shall have sloping, sheeting, shoring, and bracing conforming with 29CFR Part 1926 Subpart P – Excavations, CAL/OSHA requirements, and the General Conditions.

3.02 SIDEWALK, PAVEMENT, AND CURB REMOVAL

- A. Cut bituminous and concrete pavements regardless of the thickness and curbs and sidewalks prior to excavation of the trenches with a pavement saw or pavement cutter. Width of the pavement cut shall be at least equal to the required width of the trench at ground surface. Haul pavement and concrete materials from the site. Do not use for trench backfill.

3.03 TRENCH EXCAVATION

- A. Excavate the trench to the lines and grades shown in the drawings with allowance for pipe thickness, sheeting and shoring if used, and for pipe base or special bedding. If the trench is excavated below the required grade, refill any part of the trench excavated below the grade at no additional cost to the Owner with imported sand. Place the refilling material over the full width of trench in compacted layers not exceeding 8 inches deep to the established grade with allowance for the pipe base or special bedding.
- B. Trench widths in the pipe and pipe bedding zone shall be as shown in the District drawings. If no details are shown, maximum width shall be 8 inches greater than the pipe outside diameter. Comply with 29CFR Part 1926 Subpart P – Excavations. Trench width at the top of the trench will not be limited except where width of excavation would undercut adjacent structures and footings. In such case, width of trench shall be such that there is at least 2 feet between the top edge of the trench and the structure or footing.
- C. The surface of all trenches in the traveled way shall be temporarily patched or otherwise surfaced at the end of each working day. Minimum cover over utilities shall conform to County of San Luis Obispo U-1 standard drawing for installation. Maximum length of work under construction at any time shall not exceed 500 feet.
- D. Reasonable care shall be taken to avoid damage to major roots of trees.
- E. Pavement restoration following trench excavation shall be completed in accordance with County of San Luis Obispo encroachment permit requirements and standard drawings, R-1, R-3, and/or R-3a.

3.04 LOCATION OF EXCAVATED MATERIAL

- A. During trench excavation, place the excavated material only within the working area. Do not obstruct any roadways or streets. Do not place trench spoil over pipe, buried utilities, manholes, or vaults. Conform to federal, state, and local codes governing the safe loading of trenches with excavated material.

- B. Locate trench spoil piles at least 15 feet from the tops of the slopes of trenches. Do not operate cranes and other equipment on the same side of the trench as the spoil piles.
- C. Locate stockpiles a minimum of 50 feet away from water bodies such as creeks, rivers, and drainage courses. Stockpiles shall not be located in environmentally sensitive areas.

3.05 DEWATERING

- A. Provide and maintain means and devices to remove and dispose of water entering the trench excavation during the time the trench is being prepared for the pipe laying, during the laying of the pipe, and until the backfill at the pipe zone has been completed. These provisions shall apply during both working and nonworking hours, including lunchtime, evenings, weekends, and holidays. Dispose of the water in a manner to prevent damage to adjacent property and in accordance with regulatory agency requirements. Do not drain trench water through the pipeline under construction.

3.06 FOUNDATION STABILIZATION

- A. After the required excavation has been completed, the Owner will inspect the exposed subgrade to determine the need for any additional excavation. It is the intent that additional excavation be conducted in all areas within the influence of the pipeline where unacceptable materials exist at the exposed subgrade. Overexcavation shall include the removal of all such unacceptable material that exist directly beneath the pipeline to a width 24 inches greater than the pipe outside diameter and to the depth required.
- B. Place filter fabric on the bottom of the trench and up the sides a sufficient height to retain rock refill material. Backfill the trench to subgrade of pipe base with rock refill material for foundation stabilization. Place the foundation stabilization material over the full width of the trench and compact in layers not exceeding 8 inches deep to the required grade. Foundation stabilization work shall be executed in accordance with a change order.
- C. Rock refill used by the Contractor for his convenience will not be cause for any additional payment.

3.07 INSTALLING BURIED PIPING

- A. Grade the bottom of the trench to the line and grade to which the pipe is to be laid, with allowance for pipe thickness. Remove hard spots that would prevent a uniform thickness of bedding. Place the specified thickness of pipe base material over the full width of trench. Grade the top of the pipe base ahead of the pipe laying to provide firm, continuous, uniform support along the full length of pipe, and compact to the relative compaction specified herein. Before laying each section of the pipe, check the grade and correct any irregularities.
- B. Excavate bell holes at each joint to permit proper assembly and inspection of the entire joint. Fill the area excavated for the joints with the bedding material specified or indicated in the drawings for use in the pipe zone.

- C. Inspect each pipe and fitting before lowering the buried pipe or fitting into the trench. Inspect the interior and exterior protective coatings. Patch damaged areas in the field with material recommended by the protective coating manufacturer. Clean ends of pipe thoroughly. Remove foreign matter and dirt from inside of pipe and keep clean during and after installation.
- D. Handle pipe in such a manner as to avoid damage to the pipe. Do not drop or dump pipe into trenches under any circumstances.
- E. When installing pipe, do not deviate more than 0.2-foot from line or 1/4 inch from grade. Measure elevation at the pipe invert.
- F. After pipe has been bedded, place pipe zone material simultaneously on both sides of the pipe, in maximum 8-inch lifts, keeping the level of backfill the same on each side. Carefully place the material around the pipe so that the pipe barrel is completely supported and no voids or uncompacted areas are left beneath the pipe. Use particular care in placing material on the underside of the pipe to prevent lateral movement during subsequent backfilling.
- G. Compact each lift to the relative compaction specified herein. Push the backfill material carefully onto the backfill previously placed in the pipe zone. Do not permit free-fall of the material until at least 2 feet of cover is provided over the top of the pipe. Do not drop sharp, heavy pieces of material directly onto the pipe or the tamped material around the pipe. Do not operate heavy equipment or a sheepsfoot wheel mounted on a backhoe over the pipe until at least 3 feet or one-half of the internal diameter, whichever is greater, of backfill has been placed and compacted over the pipe.
- H. When pipe laying is not in progress, including the noon hours, close the open ends of pipe. Do not allow trench water, animals, or foreign material to enter the pipe.
- I. Keep the trench dry until the pipe laying and jointing are completed.

3.08 BACKFILL COMPACTION

- A. Unless otherwise shown in the drawings or otherwise described in the specifications for the particular type of pipe installed, relative compaction in pipe trenches shall be as follows:
 - 1. Pipe and Pipe Bedding Zone: 90% relative compaction.
 - 2. Backfill in Trench Zone to Street Zone in Paved Areas: 90% relative compaction.
 - 3. Backfill in Street Zone in Paved Areas: 95% relative compaction.
 - 4. Rock Refill for Foundation Stabilization: 80% relative density.
 - 5. Refill for Overexcavation: 80% relative density.

- B. Compact trench backfill to the specified relative compaction. Compact by using mechanical compaction or hand tamping. Do not use high-impact hammer-type equipment except where the pipe manufacturer warrants in writing that such use will not damage the pipe.
- C. Compact material placed within 12 inches of the outer surface of the pipe by hand tamping only.
- D. Do not use any axle-driven or tractor-drawn compaction equipment within 5 feet of building walls, foundations, and other structures.

3.09 MATERIAL REPLACEMENT

- A. Remove and replace any trenching and backfilling material that does not meet the specifications, at the Contractor's expense.
- B. Compaction tests shall be taken in locations as determined by the County of San Luis Obispo.

END OF SECTION

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SECTION 330131 SANITARY SEWER SYSTEM TELEVISION INSPECTION

PART 1 - GENERAL

1.01 DESCRIPTION

- A. This section includes television inspection digital audio-visual recording and reports associated with inspection of sanitary sewers.

1.02 RELATED WORK DESCRIBED ELSEWHERE

- A. PVC Gravity Sewer Pipe: Section 333112.

1.03 DEFINITIONS

- A. Television Inspection: Operation necessary to complete a true-color audio-visual inspection for verification of existing internal sewer line conditions. Furnish labor, materials, equipment, tools, and other incidental services for CCTV inspection.
- B. MPEG: MPEG, which stands for Moving Pictures Expert Group, is the nickname given to a family of international standards fused for coding audio-visual information in a digital compressed format. For the purposes of this specification, digital audio-visual coding has a resolution of 640 pixels (x) by 480 pixels (y) and an interlaced frame rate of 30 frames per second. MPEG coding shall be named using the .mpg as the file extension.
- C. Compact Disk-Read Only Memory (CD-ROM): For the purposes of this specification, CD-ROM shall be defined as a CD-R written or “burned” in accordance with the ISO-9660 Level 2 specifications.

PART 2 - MATERIALS

2.01 GENERAL

- A. Furnish the television inspection studio, television camera, audio-visual digital encoding equipment/software, and other necessary equipment, materials, electricity, labor, technicians, as may be needed to perform the television inspection.

2.02 TELEVISION INSPECTION EQUIPMENT

- A. The television inspection equipment shall be capable of inspecting a minimum of 1,500 feet of sewer line, when entry into the sewer can be accessed from the upstream and downstream manholes. When entry is at one end only, the inspection equipment shall be capable of inspecting 750 feet by a self-propelled unit. The inspection equipment shall be capable of clearly televising the interior of a 6-inch-diameter sewer and larger sizes.

- B. Transport the television equipment in a stable condition through the sewer line to be inspected. Throughout the inspection, position the camera equipment with the camera directed along the longitudinal axis of the sewer. When the television equipment is towed by winch and bond through the sewer line, the winches shall be stable with either locking or ratcheting drums. Winches shall be inherently stable under loaded conditions. The bonds shall be steel or of an equally nonelastic material to ensure the smooth and steady progress of the camera extension or traction through the sewer conduit. Prevent damage to the sewer conduit during the television inspection. In the case where the Contractor, for any reason, causes damage such as would be caused by incorrect deployment of bonds or retrieval of lodged equipment, the cost of repair or remedy shall be borne by the Contractor.

2.03 TELEVISION CAMERA

- A. Use a television camera specifically designed and constructed for sewer pipeline inspection. The camera shall be waterproof and shall be operative in any conditions that may be encountered in the inspection environment. Provide a color pan and tilt camera to facilitate the inspection of service laterals and sewer line and manhole defects. The television camera shall be capable of 360-degree rotational scan indicating salient defects. The tilt arc shall not be less than 225 degrees unless otherwise approved by the Owner's Representative. The adjustment of focus and iris shall provide a minimum focal range of 3 inches in front of the camera's lens. Provide a visual size reference visible in front of the camera. The size reference must include sizes 1/4"-2".
- B. The distance along the sewer in focus from the initial point of observation shall be a minimum of twice the vertical height of the sewer.
- C. The illumination shall be such as to allow an even distribution of the light shadowing.
- D. The view seen by the television camera shall be transmitted to a monitor of not less than 11 inches in size. The television camera shall be capable of receiving and transmitting a picture having not less than a resolution 640(x) by 480(y). The travel speed of the television inspection camera (through the sewer) shall be uniform and shall not exceed the maximum speed directed by the Owner's Representative, 6 inches per second under normal conditions.
- E. Test the television inspection equipment to verify the picture quality. Use the Macroni Regulation Chart No.1 or the equipment manufacturer's recommendation to clearly differentiate between the following colors: white, yellow, cyan, green, magenta, red, blue, and black.
- F. The television inspection equipment shall be of such quality as to enable the following to be achieved:
 - 1. Color: With the monitor adjusted for correct saturation, the six colors plus black and white shall be clearly resolved with the primary and complementary colors in order of decreasing luminance.

2. Linearity: The background grid shall show squares of equal size, without convergence/divergence over the whole of picture. The center circle shall appear round and have the correct height/width relationship ($\pm 5\%$).
3. Resolution: The live picture must be displayed on a digital or analog monitor capable of providing a clear, stable image free of electrical interference with minimum horizontal resolution not less than 640(x) by 480(y) lines.
4. Color Consistency: To ensure that the camera shall provide similar results when used with its own illumination source, the lighting shall be fixed in intensity prior to commencing the survey. In order to ensure color consistency, no variation illumination shall take place during the inspection.
5. The Owner's Representative may periodically check both the live and video picture color consistency against the color bar. Any differences will necessitate resurvey of the new length or lengths affected, at the Contractor's expense.
6. The CCTV monitor display shall incorporate an automatically updated record in feet and tenths of a foot of the distance along the line from the cable calibration point to the center point of the camera or center point of the transducer, whichever unit is being used. The relative positions of the two center points should also be noted. Use a metering device that enables the cable length to be accurately measured; this shall be accurate $\pm 1\%$ or 6 inches whichever is greater. Demonstrate that the tolerance is being achieved by tape measurement between manholes on the surface. This taped measurement must be included on each television log both written and digital.
7. If the Contractor fails to meet the required standard of accuracy, the Owner's Representative will instruct the Contractor to provide a new device to measure the footage. The Owner's Representative may, at his discretion, instruct the Contractor in writing, to resurvey those lengths of sewer first inspected with the original measuring device using the new measuring device.
8. Audio-visual recordings and collected data made during the television inspection shall become the property of the Owner. Submit to the Owner immediately upon completion of the television inspection.

2.04 TELEVISION STUDIO

- A. The television studio shall be large enough to accommodate three people for the purpose of viewing the television monitor while the inspection is in progress. The television studio shall be insulated against noise and extremes in temperature and shall be provided with means of controlling external and internal sources of light in a manner capable of ensuring that the monitor screen display is in accordance with the requirements of this specification. The Owner's Representative shall have access to view the television screen at all times. Locate the central control panel and television camera control in the mobile television studio. Mount the television studio on a mobile vehicle (truck or trailer), which allows safe and orderly movement of the inspection equipment throughout the jobsite.

PART 3 - EXECUTION

3.01 TELEVISION INSPECTION

- A. Inspect sewer pipelines with pan and tilt conventional television imagery so as to record relevant features and defects of the pipeline under inspection. Inspection of pipelines shall be carried out in a format reviewed by the Owner's Representative. Perform cleaning in accordance with the requirements of the contract documents. A skilled technician or supervisor who shall be located at the control panel in the mobile television studio shall control the operation of the television equipment.
- B. If television inspection of an entire section cannot be successfully performed from one manhole, perform a reverse setup to obtain a complete television inspection. No additional payment will be made for a reverse setup.
- C. Provide a complete television inspection of both the upstream and downstream manholes beginning at the top of each manhole and panning down to inspect the entire manhole.
- D. Whenever prevailing conditions allow, position the camera head to reduce the risk of picture distortion. In circular sewers, position the camera lens centrally (i.e., in prime position) within the sewer. In noncircular sewers, picture orientation shall be taken at mid-height, unless otherwise agreed, and centered horizontally. Direct the camera lens along the longitudinal axis of the sewer when in prime position. A positioning tolerance of $\pm 10\%$ of the vertical sewer dimension shall be allowed when the camera is in prime position.
- E. Perform television inspections during low flow conditions. The Owner's Representative will reject any television inspection that, because of high flow conditions or for any other reason, does not produce an effective survey of the sewer pipe. If the water level is greater than 25% of the pipe diameter, conventional television inspection shall not be attempted without prior approval from the Owner's Representative. In addition, if it is determined that effective conventional television inspection cannot be performed, notify the Owner's Representative in writing.
- F. Do not pull a cleaning device in front of the television inspection camera during the taping of the sewer line.

3.02 DIGITAL AUDIO/VISUAL RECORDING

- A. Take continuous digital video recordings of the inspection view as it appears on the television monitor. It is intended that a digital video recording will be made of the complete television inspection of the sewer lines constructed as part of this project. The recording shall also be used as a permanent record of defects. The recording shall be MPEG file format. The digital video encoding shall include both sound and video information that can be reproduced with a video image equal or very close to the quality of the original picture on the television monitor. The replay of the recorded video information, when reviewed by Windows Media PlayerTM, shall be free of electrical interference and shall produce a clear, stable image. The audio portion of the composite

digital coding shall be sufficiently free of electrical interference background noise to produce an oral report that is clear and completely and easily discernible.

- B. The audio portion of the inspection report shall include the location or identification of the section, the manhole-to-manhole direction of travel, and the distance traveled on the specific run encountered. The inspection camera equipment shall be on the specific run encountered. Continuously connect the inspection camera equipment to the television inspection or monitoring equipment. The recording and monitoring equipment shall have the built-in capability to allow the Owner's Representative to instantly review both the audio and video quality of the recordings during the television survey. Playback speed shall be continuously adjustable from one-third normal speed for slow-motion viewing to normal playback speed.
- C. Create separate MPEG files for each sewer line segment. In case of a reverse setup, store such inspection in a separate MPEG file. MPEG files shall be shared with the Owner and Owner's Representative by means of a FTP server, USB flash drive, external hard drive, CD-ROM, or other method approved by the Owner.
- D. If written to CD-ROM or DVD-ROM media for delivery to the Owner's Representative. Multiple MPEGs may exist on each CD-ROM or DVD-ROM. Each CD-ROM or DVD-ROM shall be labeled, at a minimum, with the following information: Owner, Engineering Firm, Project Name, Date of creation, ID number, Sewer Line Sections, and TVI Contractor's firm name.
- E. Name the MPEG files according to the following file specification: [Start Manhole Number]_[End Manhole Number]_[Month]_[Day]_[Year].mpg
- F. The Owner's Representative reserves the right to refuse an MPEG on the basis of poor image quality, excessive bit rates, inconsistent frame rates, or any other characteristics that may affect usability by the Owner's Representative.

3.03 TELEVISION INSPECTION REPORTS

- A. Prepare a television inspection report covering the television inspection work and the information acquired. Prior to beginning work, submit a sample hardcopy television inspection report to the Owner's Representative for review.
- B. Report sewer defects in accordance with the National Association of Sewer Service Companies (NASSCO) program known as Pipeline Assessment and Certification Program (PACP). The Owner's Representative reserves the right to refuse any inspection report that does not comply with the PACP program.
- C. Prior to beginning work, submit to the Owner's Representative certification in NASSCO's PACP. Do not commence work until such certification is provided.

3.04 QUALITY CONTROL

- A. Operate a quality control system that will effectively gauge the accuracy of inspection reports produced by the operator.
- B. The Owner's Representative shall be entitled to audit the control system and be present when assessments of the sewer integrity are being determined. When requested by the Owner's Representative in writing, forward to the Owner's Representative sufficient details and information for such audit assessment. Should any report fail to achieve a margin that the Owner's Representative deems satisfactory, the Contractor, without any additional compensation, shall recode and resubmit any data or reports that the Owner's Representative deems necessary.

END OF SECTION

SECTION 333112 PVC GRAVITY SEWER PIPE

PART 1 - GENERAL

1.01 DESCRIPTION

- A. This section includes materials, installation, and testing of PVC gravity sewer pipe conforming to ASTM D3034.

1.02 RELATED WORK SPECIFIED ELSEWHERE

- A. Trenching, Backfilling, and Compacting: Section 312316.
- B. Sanitary Sewer System Television Inspection: Section 330131.

1.03 SUBMITTALS

- A. Submit shop drawings in accordance with the General Conditions and Section 013300.
- B. Submit reports on testing per ASTM D3034 (pipes 4 inches through 10 inches).

PART 2 - MATERIALS

2.01 PVC MATERIAL

- A. Comply with requirements of ASTM D3034.

2.02 PIPE

- A. Pipe 4 through 10 inches shall conform to ASTM D3034, SDR 35.

2.03 JOINTS

- A. Provide elastomeric gasket joints of the push-on type, conforming to ASTM D3212.

2.04 GASKETS

- A. Gaskets for push-on joints shall conform to ASTM F477.

2.05 FITTINGS

- A. Fittings for pipe 4 through 10 inches shall conform to ASTM D3034, SDR 35.

2.06 MANDREL FOR FIELD TESTING OF PIPE DEFLECTION

- A. The mandrel shall:

1. Be a rigid, nonadjustable, odd-numbering-leg (nine legs minimum) mandrel having an effective length not less than its nominal diameter.
2. Have a minimum diameter at any point along the full length as follows:

Pipe Material	Nominal Size (inches)	Minimum Mandrel Diameter (inches)
SDR 35 PVC	8	7.524

3. Be fabricated of steel; be fitted with pulling rings at each end; be stamped or engraved on some segment other than a runner indicating the pipe material specification, nominal size, and mandrel outside diameter (e.g., PVC, D 3034-8"-7.524"); and be furnished in a carrying case labeled with the same data as stamped or engraved on the mandrel.
4. All costs incurred by the Contractor attributable to mandrel and deflection testing, including any delays, shall be borne by the Contractor at no cost to the Owner.

PART 3 - EXECUTION

3.01 INSTALLING PVC SEWER PIPE

- A. Install in accordance with Section 312316, ASTM D2321, and as described below.
- B. Pipe shall not deviate more than 1 inch from line or 1/4 inch from grade. Measure for grade at the pipe invert.
- C. Minimum bedding thickness shall be as specified in Section 312316.
- D. Lay pipe without break, upgrade from structure to structure, with the socket ends of the pipe upgrade.
- E. Do not use the pipe as a drain for removing water that has infiltrated into the trench.
- F. After joint assembly, bring the bedding material up to pipe spring line. Bedding material shall be imported sand per Section 312316. Place the bedding material on each side of the pipe. Tamp the bedding material into final position at pipe spring line and continue to the top of the pipe. Relative compaction shall be in conformance with Section 312316.
- G. Then place bedding material to 1 foot above the top of the pipe and compact to the same relative compaction as in the pipe zone per Section 312316. The remainder of the trench backfill shall be native material, installed per Section 312316.
- H. Do not use hydro-hammers to compact bedding or backfill.

3.02 INSTALLING LATERALS

- A. Each wye branch fitting shall have its barrel diameter equal to the diameter of the sanitary sewer main and the spur (or branch) diameter as indicated in the drawings. Do not place wye branches within 5 feet of any structure unless shown otherwise on the Drawings.
- B. Install wye fittings so that the outlet branch is inclined upward at an angle of 45 degrees. Plug wye branch fittings that are to be left unconnected with a stopper or plug. Join laterals to wye branch fittings at the sanitary sewer main by eighth bends. Eighth bends and quarter bends are a part of lateral sewer line.
- C. End of the lateral shall be at least 3 feet below the existing or proposed grade of the ground at existing structure to be served or as called for in the drawings.
- D. Where possible, laterals shall run perpendicular to the sewer main at a minimum grade of 2%. Bed laterals the same as the sewer main into which they connect.
- E. Mark the location of each lateral by chiseling a letter "S" 1 1/2 inches high on the top of the curb. If the terminal point of the lateral is more than 8 feet beyond the curb line or curb improvements do not exist, provide and install a 4-inch by 4-inch by 3-foot 0-inch stake extending 2 inches above the ground and placed at the end of the connection.

3.03 INSTALLING PIPE AT MANHOLES AND STRUCTURES

- A. Remove portion of manhole wall as required to allow insertion of new pipe.
- B. Cut and place PVC pipe to fit flush with inside manhole wall face. Maintain the existing channel.
- C. Install O-ring waterstop seal around new pipe and centered within existing manhole wall.
- D. Fill annular space between new pipe and existing manhole with non-permeable non-shrink grout. Rough existing concrete surface to full amplitude of 1/4" and apply a bonding agent prior to placing non-shrink grout.
- E. Do not cast pipe bells into manholes or structures. Cut off the bell so that no recess or offset appears on the exposed face from the inside wall of the pipe to the outside wall of the pipe. The pipe shall have a plain end, flush with the inside wall of the manhole or structure, or as shown in the drawings.

3.04 TESTING FOR DEFECTS OF INSTALLED PIPE

- A. Following placement and compaction of backfill and prior to placing permanent pavement, ball and mandrel the pipe to measure for obstructions (excessive deflections, joint offsets, and lateral pipe intrusions).

3.05 FIELD TESTING FOR PIPE DEFLECTION

- A. Test installed pipe to ensure that vertical deflections for plastic pipe do not exceed the maximum allowable deflection. Maximum allowable deflections shall be governed by the mandrel requirements stated herein and shall nominally be:

Nominal Pipe Size	Percentage
Up to and including 12 inches	5.0

- B. The maximum average inside diameter shall be equal to the average outside diameter per applicable ASTM standard minus two minimum wall thicknesses per applicable ASTM standards. Manufacturing and other tolerances shall not be considered for determining maximum allowable deflections.
- C. Pull a mandrel through the pipe by hand to verify that maximum allowable deflections have not been exceeded. Prior to use, the mandrel shall be certified by an independent testing laboratory. Use of an uncertified mandrel or a mandrel altered or modified after certification will invalidate test. If the mandrel fails to pass, the pipe will be deemed to be over-deflected.
- D. Uncover any over-deflected pipe and, if not damaged, reinstall. Remove damaged pipe from the site. Any pipe subjected to any method or process other than removal, which attempts, even successfully, to reduce or cure any over-deflection, shall be uncovered, removed from the site, and replaced with new pipe.

3.06 TESTING FOR ALIGNMENT AND GRADE

- A. After the pipe has been installed, backfilled to existing grade, and manholes raised to grade and resurfaced, "ball" the pipe from manhole to manhole with a sewer scrubbing ball. After balling the pipe, perform the following:
1. Perform television inspection per Section 330131. If deficiencies are observed, make a digital video recording and note defects requiring correction. Upon completing the corrective work, notify the Owner and retelevise.

END OF SECTION

APPENDIX A: COUNTY OF SAN LUIS OBISPO DRAFT ENCROACHMENT PERMIT



County of San Luis Obispo DEPARTMENT OF PUBLIC WORKS

County Government Center, Room 206 - San Luis Obispo CA 93408
Phone: (805) 781-5252 Email: pw.permits@co.slo.ca.us

Permit #: ENC20270040

Issued: 07/28/2026

Expires: 10/22/2026

Status: PENDING

UTILITY ENCROACHMENT PERMIT

Contacts

	NAME	ADDRESS	PHONE / EMAIL	LICENSE
APPLICANT:	ARDURRA GROUP C/O MADDIE RONIA	354 PACIFFIC ST SAN LUIS OBISPO, CA 93401	(661) 383-7688 mronia@ardurra.com	
CONTRACTOR:	ARDURRA GROUP, INC. C/O MADDIE RONIA	354 PACIFIC ST SAN LUIS OBISPO, CA 93401	(661) 383-7688 mronia@ardurra.com	LIC: N/A EXP: 09/30/2026
OWNER:	ARDURRA GROUP ON BEHALF OF OCEANO CSD C/O TONY MARRACCINO	1655 FRONT ST. PO BOX 599 OCEANO, CA 93475	(805) 481-6730 tony@oceanocsd.org	

Permit Information

Road Number:	Belridge St - M1108	Charge Number:	245R12C104O
Situs:	VARIOUS	APN:	
BLD Permit:		Community:	Oceano
Inspector:	Nate Gardner 805-305-1516		

Work Description

LEGAL DESC:

Sewer system upgrades throughout Oceano. Remove existing 8" VCP and install new 8" SDR35 PVC gravity sewer between SSMH #A9-A-A and SSMH #A9-A-B on Belridge Street. Replace at approximately 5 LF (length to be adjusted as needed) of sewer gravity main with 10" SDR 35 PVC to remove lodged PVC fragment in existing 10" VCP sewer gravity main on Wilmar Avenue. Lateral replacement rehabilitation at (3) addresses: 1323 and 1830 19th Street, and 2160 Nipomo Street. Approximate repair lengths are 10, 5, and 15 LF, respectively. All upgrades will utilize trench and pit excavation.

This is Bid Purpose document only not issued permit.

1. Mandatory preconstruction meeting with County Public Works Inspector (805) 305-1516
2. Contractor to pothole and verify all Utility crossings and points of connection.
3. Contractor to protect all existing survey monuments - any disturbed or damaged monuments to be reset or replaced per County Standards and or County inspectors discretion.
4. Utility work in accordance with County Public Improvement Standards U-2, U-3, U-4 and U-4a.
5. Pavement restoration in accordance with County Public Improvements Standards R-1, R-2, R-3. Full or half lane restoration is required and is per the discretion of the County encroachment inspector. Shoulder to be restored in accordance with permit conditions and County Standards.
6. Repair and restore pavement in County ROW per County standards (R Series). Public Works inspector must approve final extents of required repairs (see specific requirements below).
 - Recessed plates may be required (discuss with County Inspector for further details)
 - Backfill and repair trenches and excavations in County ROW per County standards U-4 and U-4b. Where used, slurry must be 2-sack minimum.
7. Repair and replace in-kind any damaged or disturbed road improvements including shoulders, drainage channels, culverts, road median, road crossings, landscaping, fencing, irrigation, etc. per County Public Improvement Standards where applicable.
8. Perform traffic control per MUTCD and permit conditions.
9. Traffic control plan must be submitted to Public Works for review and approval prior to permit issuance.
10. Traffic control in accordance with permit conditions and submitted TCP.
11. Notify all local emergency services and impacted residents of any road closure and or detours minimum 72hours in advance.
12. No driveways to be blocked.

13. Allow access to impacted residents when safe to do so.
14. Place no parking signs 72hrs in advance.
15. Based on project duration and road closure, CMS boards may be required.

Fee Summary

DATE	DESCRIPTION	FEE AMOUNT	PAID	BALANCE DUE
07/24/2026	Utility (Non Franchise)	\$742.00	\$0.00	\$742.00
07/29/2026	Utility (Non Franchise) - no charge	(\$742.00)	\$0.00	(\$742.00)
TOTAL DUE:		\$0.00	\$0.00	\$0.00

Project Specific Conditions

B01 - PERMITTED SHOULDER, LANE, AND ROAD CLOSURES

Shoulder closures are permitted on:
 Contractor will share TCP during Construction
 Lane closures are permitted on:
 Contractor will share TCP during Construction

Road closures are permitted on:
 NO ROAD CLOSURES PERMITTED

C02 - STORMWATER WAIVER

By signing this permit, the owner/authorized agent/contractor of record for this project certifies that this project is not subject to post construction performance requirements (Central Coast Water Board Resolution R3-2013-0032) for one of the reasons below. If field changes necessitate the replacement of impervious surfaces to the subgrade or an expansion of impervious areas, the applicant must notify Public Works.

- (1) The project will create and/or replace less than 2,500 square feet of impervious area.
- (2) The project consists of one or more items recognized by the RWQCB as non-regulated projects per the list below.

Non-Regulated Projects

- Road surface repair including slurry sealing, fog sealing, and pothole and square cut patching, or crack sealing.
- Repair/reconstruction of road because of slope failures, natural disasters, acts of God or other man-made disaster.
- Resurfacing with in-kind material without expanding the road.
- Shoulder grading.
- Overlaying existing asphalt or concrete pavement with asphalt or concrete without expanding area of coverage.
- Cleaning, repairing, maintaining, reshaping, or re-grading drainage systems.
- Practices to maintain original line and grade, hydraulic capacity, and overall footprint of the road.
- Underground utility projects that replace ground surface with in-kind material or materials with similar runoff characteristics.
- Curb and gutter improvement or replacement projects that are not part of any additional creation or replacement of impervious surface area (e.g., sidewalks, roadway).
- Electrical and utility vaults, sewer and water lift stations, backflows and other utility devices.

X01 - GENERAL ENCROACHMENT CONDITIONS

Pursuant to California Streets and Highways Code Section 1463, the applicant is hereby notified that in the event the future improvement of the road necessitates the relocation of such encroachment the permittee will relocate the same at his sole expense. In said event the road commissioner shall serve on the permittee his written demand specifying the place of relocation and specifying a reasonable time within which the work of relocation must be commenced. The permittee must commence such relocation within the time specified in said demand and thereafter diligently prosecute the same to completion.

All permits other than those issued to public agencies or a public utility having lawful authority to occupy the roads are revocable on five days' notice and the encroachment must be removed or relocated as may be specified by the road commissioner in the notice revoking the permit and within a reasonable time specified by the road commissioner unless the permit provides a specified time.

Public utilities may be required, within a reasonable time, to relocate such of their facilities as interfere with an enlarged public use of the road, except in those cases where the enlarged use of the road involves a state freeway.

If required, a cash deposit has been posted by the permittee. It is agreed that funds will be drawn from the deposit to pay the actual costs of any action taken by the County to correct any unsafe condition that may arise during the course of the above permitted activity.

TRAFFIC CONTROL:

The contractor shall be responsible for providing traffic control throughout all phases of work in accordance with Part 6 of the California Manual on Uniform Traffic Control Devices (CA MUTCD).

PEDESTRIAN PROTECTION:

The permittee shall be responsible for constructing and maintaining pedestrian protection devices at all times and in accordance with the California Manual of Uniform Traffic Control Devices (CA-MUTCD), and the California Building Code (CBC). If permitted herein, sidewalk closures must conform to Part 6 of the CA-MUTCD, including TA-28 and TA-29; and pedestrian protection through a construction zone must conform to CBC §3306, including barricades, railings, covered walkways.

ENVIRONMENTAL:

In the event archeological resources are unearthed or discovered during construction activities associated with this permit all work must immediately cease and the permit inspector notified. Work may only resume after a mitigation plan to avoid the resources to the maximum degree feasible has been approved by the County.

All mitigation required by project environmental permits will be the responsibility of the permittee. Applicable permits may include local agency, U.S. Army Corps of Engineers, the California Regional Water Quality Control Board/State Water Resources Control Board, and/or the California Department of Fish & Wildlife. The permittee must submit copies of each environmental permit to the County Department of Public Works prior to release of improvement security.

SURVEY MONUMENT PRESERVATION:

Prior to commencing work the permittee shall hire a licensed land surveyor or registered civil engineer, legally authorized to practice land surveying, to locate all the survey monuments within the work zone and file a corner record or record survey of the references with the County Surveyor if the monument could be destroyed, damaged, covered, disturbed, or otherwise obliterated. Prior to completion of the permitted work, all disturbed monuments shall be reset in the surface of the new construction, a suitable monument box placed thereon, or permanent witness monuments set to perpetuate their location; and a new corner record or record of survey of the references shall be filed with the County Surveyor. It shall be the responsibility of the permittee to provide for the monumentation required by this section.

MAINTENANCE OF FACILITIES:

The permittee agrees to exercise reasonable care to maintain properly any encroachment placed by it in the highway and to exercise reasonable care in inspecting for and immediately repairing and making good any injury to any portion of the highway which occurs as a result of the maintenance of the encroachment in the highway or as a result of the work done under this permit, including any and all injury to the highway which would not have occurred had such work not been done or such encroachment not placed therein.

RESTORATION OF RIGHT-OF-WAY:

Upon completion of the work authorized per this permit, the permittee, at its sole expense, must restore the right-of-way (roads and shoulder) to a condition equivalent to the right-of-way condition immediately before the encroachment work was commenced, unless otherwise authorized by the County Inspector or County Development Services Engineer.

Restoration of the right-of-way (road and shoulder) is at the sole discretion of the County Development Services Engineer and/or County Inspector. Any work (trenching, potholing, boring, etc.) to county-maintained roads may require full lane, half lane, etc., overlays to be paved back based on the assessment of the County Development Services Engineer and/or County Inspector and can be requested at any point during the project. Assessment is based upon existing road condition, extent of work activities, any amendments to the scope of work, and requirements set forth in Public Improvements Standard R-1 for seam locations.

ACCEPTANCE:

Commencement of any work under this permit shall constitute acceptance of all conditions and requirements of the permit whether or not the permit is signed by said person or an authorized representative of said person, firm or corporation.

AGREEMENT CLAUSE:

The permittee agrees and accepts that the work will be conducted in accordance with the Encroachment Permit Conditions, the (County) Public Improvement Standards, the Streets and Highways Code, State Vehicle Code, County Code, and these attached Provisions.

The permittee agrees and accepts that any work within the right of way of a county-maintained road shall be performed by an appropriately licensed and bonded contractor and shall provide traffic control per the latest California Manual of Uniform Traffic Control Devices.

The permittee shall defend, indemnify and save harmless the County of San Luis Obispo, its officers, agents and employees from any and all claims, demands, damages, costs, expenses, or liability that relate in any way to this permit, including, but not limited to, any act or omission on the part of the permittee, or of agents, employees, or independent contractors directly responsible to the permittee; including, but not limited to, any defects, flaws or errors in the design or performance of any work under this permit, providing further that the foregoing shall apply to any acts, or omissions to act, committed jointly or concurrently by the permittee, the permittee's agents, employees or independent contractors, and the County, its agents, employees or independent contractors. Nothing contained in the foregoing indemnity provisions shall be construed to require the permittee to indemnify the County against

any responsibility or liability in contravention of Section 2782 of the Civil Code.

X02 - GENERAL ENCROACHMENT PROVISIONS

Authority – This permit is issued pursuant to Chapter 13.08 of the San Luis Obispo County Code and Chapter 5.5 (commencing with Section 1450) of the Division 2 of the California Streets and Highways Code, the provisions of which are incorporated herein by reference as though fully set forth herein. Special event permits with are issued pursuant to Chapter 15.610 of the San Luis Obispo County Code and Chapter 2 (commencing with Section 942) of the Division 2 of the California Streets and Highways Code, the provisions of which are incorporated herein by reference as though fully set forth herein. Issuance or denial of permit may be appealed to the Board of Supervisors. All board decisions are final and conclusive.

Definitions – The word “County” as used herein means the County of San Luis Obispo acting by and through its Director of Public Works or his duly authorized representative. The word “work” as used herein means allowed activities in the County of San Luis Obispo right-of-way as specified in the encroachment permit.

No Precedent Established – This permit is granted with the understanding that this action is not to be considered to establish a precedent concerning any kind of encroachment within the county right-of-way.

Permits from Others – When the law requires the consent to any work hereunder from any other public board or person having jurisdiction, this permit shall be suspended unless and until such consent is obtained.

Permission from Property Owners – Whenever it is necessary to secure permission from abutting property owners, such authority must be secured by the permittee prior to the starting of work.

Responsible Party – No party other than the named permittee or their agent is authorized to work under any permit.

Notice Prior to Starting Work – Before starting work under the encroachment permit, the permittee shall notify the County 24-hours prior to initial start of work.

Indemnity – The permittee shall defend, indemnify and save harmless the County of San Luis Obispo, its officers, agents and employees from any and all claims, demands, damages, costs, expenses, or liability that relate in any way to this permit, including, but not limited to, any act or omission on the part of the permittee, or of agents, employees, or independent contractors directly responsible to the permittee; including, but not limited to, any defects, flaws or errors in the design or performance of any work under this permit, providing further that the foregoing shall apply to any acts, or omissions to act, committed jointly or concurrently by the permittee, the permittee’s agents, employees or independent contractors, and the County, its agents, employees or independent contractors. Nothing contained in the foregoing indemnity provisions shall be construed to require the permittee to indemnify the County against any responsibility or liability in contravention of Section 2782 of the Civil Code.

Other Work – This permit is to be strictly construed, and no work other than that specifically mentioned is authorized hereby.

Safety – All work shall be performed in a safe and workmanlike manner in accordance with all applicable laws and regulations.

Keep Permit on the Job – This permit shall be kept at the site of the work and shall be shown to any representative of the County, or any law enforcement officer on request.

Protection of the Public – The work shall cause the least possible inconvenience to the traveling public. Two-way traffic shall be maintained from the close of the working day to the start of the next working day. County approval required for shoulder, lane, and road closures. All warning signs, lights, devices, and procedures shall conform to the latest California Manual of Uniform Traffic Control Devices (CA MUTCD). All traffic associated with the work shall follow the provisions of the California Vehicle Code.

Standards of Construction – Any matter not specifically mentioned herein, or covered by direct reference, shall conform to the latest adopted County Public Improvement Standards, and, if not covered therein, to Caltrans Standard Specifications and Plans.

County Inspection – All work shall be subject to County inspection and performed in accordance with latest adopted County Public Improvement Standards and to the satisfaction of the County.

Expense of Inspection – On work which in the judgment of the County requires the presence of an employee of the Department of Public Works as inspector, the actual cost (including salary, traveling expense, and overhead) of such inspection shall be paid by the permittee upon presentation of a statement therefore. The cost of any tests required by the County shall be borne by the permittee.

Security – The applicant shall provide a cash security (with assignment to the County of San Luis Obispo) in the amount specified on the encroachment permit which sum is deemed sufficient by the County and which deposit aforesaid shall guarantee payment to the County of San Luis Obispo for all costs of work of improvement, engineering, inspection, maintenance, and related incidental expenses done or incurred by the County as is provided for herein. Expense of County costs shall be paid current and/or the finalization of encroachment permit is required prior to release of security.

Restoration of Right-of-Way – All portions of the right-of-way, and all adjacent areas directly affecting such, if disturbed by work

pursuant to this permit, shall be promptly restored to prior condition (including the replacement of suitable material and/or the planting of vegetation) and shall be left in a presentable condition.

Existing Utilities – The permittee shall contact all utilities to determine the location of any existing facilities prior to any excavation. The underground Service Alert ticket number and name shall be kept on the job site and be available to any representative of the County or any law enforcement officer on request. The permittee shall also contact the local water purveyor, sanitation district or other utility not affiliated with Underground Service Alert to advise them of the proposed project. The date and name of this contact must also be kept on the job site. The permittee shall immediately notify the owning utility of any damage to the existing facility.

Future Moving of Installation – In the event it becomes necessary, in the opinion of the County, to remove or relocate the encroachment permitted hereunder, such shall be accomplished by, and at the sole expense of, the permittee, and within such time and manner as may be required by the County. (Curb and gutter improvements constructed in accordance with approved plans are exempted from this provision).

Taxation of Possessory Interests – Permittee recognizes and understands that this permit may create a possessory interest subject to property taxation, and that permittee may be subject to payment of taxes levied on such interest.

Joint and Several Obligation – If there is more than one permittee subject to the terms of this permit, then all of the terms of this permit shall bind the permittees individually and collectively, and said permittees shall be individually and collectively liable therefore.

Maintenance – The permittee agrees by the acceptance of this permit to exercise reasonable care to maintain properly any encroachment placed by it in the highway and to exercise reasonable care in inspecting for and immediately repairing and making good any injury to any portion of the highway which occurs as a result of the maintenance of the encroachment in the highway or as a result of the work done under this permit, including any and all injury to the highway which would not have occurred had such work not been done or such encroachment not placed therein.

Clear Zone – Any work performed in the right-of-way shall be designed and constructed so that a 10-foot wide area beside the edge of traveled way is clear of any obstructions. No above grade unyielding fixed objects shall be constructed within this clear zone unless specifically permitted by the County. The County may consider construction within the clear zone when it is designed in a manner to break away easily if hit by a moving vehicle.

USA MEMBERSHIP REQUIREMENTS:

California Law – Every operator of a subsurface installation, except the Department of Transportation, shall become a member of, participate in, and share in the costs of, a regional notification center, (USA). Cal. Govt. Code Sections 4216-4216.9. "Operator" means any person, corporation, partnership, business trust, public agency, or other entity which owns, operates, or maintains a subsurface installation. For purposes of Section 4216.1 an "Operator" does not include any owner of real property where subsurface facilities are exclusively located if they are used exclusively to furnish services on that property and the subsurface facilities are under the operation and control of that owner. "Subsurface installation" means any underground pipeline, conduit, duct, wire, or other structure, except non-pressurized sewer lines, non-pressurized storm drains, or other non-pressurized drain lines.

UTILITY AND UNDERGROUND:

Cutting Pavement – All construction in asphalt shall be bored wherever possible. Open cut construction must be specifically permitted or may be authorized by the County to accommodate unexpected field conditions. When pavement is cut it shall be done in a manner which causes the least possible damage to the adjacent pavement. After the utility is placed and the trench backfilled and based, the pavement shall be trimmed by sawing or other approved means to a sufficient width to removal displaced or damaged pavement. If the trench edge is within 2-feet of the edge of the roadway pavement, the entire 2-feet shall be removed and replaced.

Backfill – Bedding and shading material shall be consolidated and compacted by a field approved method. Backfill material shall be consolidated and compacted to the following standards: (U-4 Series Drawings). Compaction tests shall be taken in locations as determined by the County. If approved by the County, excavations may be backfilled with vibrated sand slurry, or two sack cement slurry. All tests shall be conducted using Caltrans test methods.

Replacement of Pavement – The surface of all trenches in the traveled way shall be temporarily patched or otherwise surfaced at the end of each working day. Such temporary patching or other field approved surfacing shall be kept in a smooth, firm, dust-free condition for the safe use of the public for no more than 30-days before the final surface patch is required. Cold mix asphalt may be used as a temporary patch material; however, recessed metal plates are required on all arterial and major collector streets. Steel plate bridging shall conform to State Standards TR-0157. After the ditch edges have been trimmed, the base and pavement shall be replaced. The thickness of the base and paving to be replaced shall be determined in the field and shall be at least equal in section to that adjacent to the trench area; however, no pavement shall be less than 3-inches thick. Pavement shall be replaced with Type A hot mix asphalt which shall conform to State requirements for ½-inch maximum medium grading. Base material shall conform to State requirements for Class 2 Aggregate Base.

Plowing – The use of a static plow within 5-feet of the edge of the pavement is prohibited. A vibrating plow may be used to within 1-foot off the edge of the pavement. Any pavement that is broken or otherwise disturbed by the plowing operations shall be removed

and replaced. After plowing and prior to any compaction efforts, the plow trench shall be flooded to attain a plastic condition. The trench shall then be compacted by wheel rolling or other suitable means.

General – Minimum cover over utilities shall conform to the Standard U-1 drawing for installation. Maximum length of work under construction at any time shall not exceed 500 feet. Disposal of spoil material shall be in a legal manner and outside the right-of-way unless otherwise specifically approved by the County. Reasonable care shall be taken to avoid damage to major roots of trees. If an independent contractor installs a utility, the operator of the utility must accept the work before final approval of the work by the County.

Responsibility for Failures – The utility/service company that required the installation of facilities within the limits of the County right-of-way shall assume maintenance responsibility, in perpetuity, for any damage/failure to facilities owned and/or maintained by the County of San Luis Obispo as a result of such installation.

EROSION CONTROL:

Erosion control measures for wind, water, material stockpiles, and tracking shall be implemented at all times by the contractor and shall include source control, including protection of stockpiles, protection of slopes, protection of all disturbed areas, protection of accesses, and perimeter containment measures. Erosion control shall be placed prior to the commencement of work based upon location, site characteristics or time of year. The intent of erosion control measures shall be to keep all generated sediments from entering a swale, drainage way, watercourse, atmosphere, or migrate onto adjacent properties or onto the public right-of-way.

The contractor shall be responsible for the placement and maintenance of all storm water control measures/devices and shall be available, installed, and/or applied between October 15 and April 15 or anytime the rain probability exceeds 30% per the satisfaction of the permit inspector and the County Public Improvement Standards.

In the event of a failure, the contractor shall be responsible for cleanup and all associated costs or damage. In the event that damage occurs within the right-of-way and the County is required to perform cleanup, the permittee shall be responsible for reimbursing the County all associated costs.

USE OF ROAD SHOULDER (IF SPECIFICALLY PERMITTED): Use of a county shoulder for construction staging and material storage must have prior approval from County Public Works.

Unless permitted otherwise, no construction equipment or materials shall be parked or stored within ten (10) feet of the edge of traveled way or conflict with access to properties, utilities, etc.

The shoulder area shall be signed as closed and portable delineators used to mark a taper in advance of the material or equipment. All delineators shall be equipped with nighttime reflective bands and spaced no greater than 25-foot intervals along the edge of work zone.

Safe public (pedestrian) access to the road shoulder between the edge of pavement and stockpile must be provided at all times.

No vehicle maintenance shall be allowed at any time.

Upon completion of work the shoulder must be returned to a condition equal to or better than pre-disturbed conditions, and to the satisfaction of the county encroachment permit inspector.

Requirements for storage of erosive materials including road base and native soil (must be specifically permitted):

1. An erosion control plan (or SWPPP if required) must be prepared and implemented by the permittee.
2. Stockpiles shall be located a minimum of 10-feet away from the nearest edge of traveled way of the adjacent public road(s); 50-feet away from water bodies such as creeks, rivers, and drainage courses; shall not be located in environmentally sensitive areas; shall not be located on slopes greater than 20%; and shall not remain longer than 6-months without prior written approval from the Department.
3. All stockpiles should be shaped, not left in an "end dump condition"; should have a slope of 3:1 or flatter with the top surface sloped downhill at minimum of 0.5% and a maximum of 5%; should not exceed 20 feet in height; and no one stockpile should exceed 5,000 cubic yards. Adjacent stockpiles should not be located closer than 50-feet to each other.
4. All stockpiles regardless of time of year shall have silt fence installed immediately around the perimeter at the toe of slope. This silt fence shall be maintained until stockpile is removed.
5. Between April 15th and October 15th stockpiles remaining inactive for longer than one (1) week shall be covered with plastic or otherwise protected to control dust.

6. Between October 15th and April 15th (rainy season) stockpiles shall be stripped of plastic coverings and appropriate Best Management Practices that reduce erosion potential and stabilize the slopes (i.e., hydro-seeding, straw, straw wattles etc.) shall be implemented.

7. Once a stockpile is removed the area below shall be returned to the original contours or final project finished grades with established vegetation.

PAVEMENT RESTORATION:

Trench restoration shall be completed in accordance with County R-1, R-3 and/or R-3a standard drawings.

Pavement restoration shall be completed in accordance with County R-1, R-2, R-2a and/or R-4 standard drawings.

All Other Permits Shall Be The Permittee's Responsibility to Obtain.

PERMITEE IS RESPONSIBLE FOR READING AND ADHERING TO ALL CONDITIONS AND PROVISIONS OF THE ENCROACHMENT PERMIT. PERMIT HOLDER SHALL CONTACT THE ENCROACHMENT PERMIT UNIT VIA E-MAIL AT PW.PERMITS@CO.SLO.CA.US OR CALL (805) 781-5252 AT LEAST FORTY-EIGHT (48) HOURS IN ADVANCE TO SCHEDULE INSPECTIONS, PRIOR TO COMMENCING OF THE WORK FOR FINAL INSPECTION.

Permit Not Valid Without County Signature

BURHAN ZAHEER

Work Completed: _____

Inspector

Date

For current standards visit: <https://www.slocounty.ca.gov/public-works/public-improvement-standards.aspx>