CITY OF SPARKS 4th STREET SEWER & STORM DRAIN

PWP NO. WA-2023-103 BID # 22/23-014

SPARKS CITY COUNCIL

ED LAWSON DONALD ABBOTT DIAN VANDERWELL WARD ONE PAUL ANDERSON CHARLENE BYBEE KRISTOPHER DAHIR WARD THREE WARD FOUR



JON ERICSON, P.E., P.T.O.E

11-9-2022

DATE

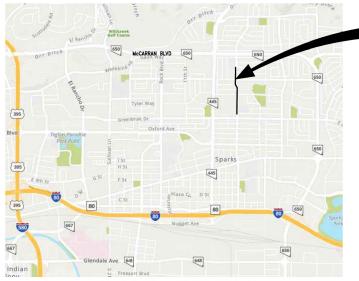
ENGINEER'S CERTIFICATE

THESE PLANS HAVE BEEN PREPARED IN ACCORDANCE WITH ACCEPTED ENGINEERING PROCEDURES AND GUIDELINES, AND ARE IN SUBSTANTIAL COMPLIANCE WITH APPLICABLE STATUTES, CITY ORDINANCES, STANDARDS AND CITY CODE. IN THE EVENT OF CONFLICT BETWEEN ANY PORTION OF THESE PLANS AND CITY CODE, CITY STANDARDS SHALL TAKE PRECEDENCE.

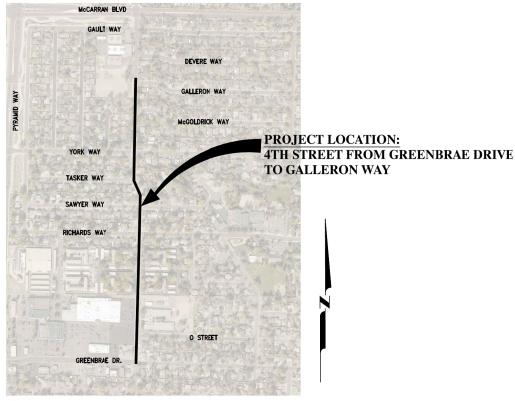
SHAWN W. JENKINS, P.E.

11-09-2022 DATE





PROJECT VICINITY MAP



PROJECT LOCATION MAP

INDEX OF SHEETS

SHEET # DESCRIPTION C1 TITLE SHEET

NOTES, LEGGEND, ABBREVIATIONS

C3 SHEET INDEX

PROJECT LOCATION:

4TH STREET

STORM DRAIN PLAN & PROFILE STA "SD1" 10+25 TO 14+50 STA " SD1" 14+50 TO 18+50 STORM DRAIN PLAN & PROFILE STORM DRAIN PLAN & PROFILE STA "SD1" 18+50 TO 22+50 STORM DRAIN PLAN & PROFILE STA "SD1" 22+50 TO 25+75 STORM DRAIN PLAN & PROFILE STA "SD2" 20+25 TO 23+50 STORM DRAIN PLAN & PROFILE STA "SD2" 23+50 TO 27+50 C10 SEWER PLAN & PROFILE STA "SS1" 30+50 TO 33+21 C11 **SEWER PLAN & PROFILE** STA "SS2" 40+26 TO 43+00 SEWER PLAN & PROFILE STA "SS2" 43+00 TO 45+92

STA "SS2" 48+88 TO 51+17

C13 SEWER PLAN & PROFILE

DETAILS

FOR BID

DATE: 11-11-2022











GENERAL NOTES

- ALL CONSTRUCTION SHALL CONFORM TO THE 2012 EDITION OF THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION AND THE STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION FOR THE CITY OF SPARKS.
- 2. CONTRACTOR IS REQUIRED TO OBTAIN ALL NECESSARY PERMITS AND PAY ALL FEES
- 3. IT IS THE INTENT OF THESE PLANS AND SPECIFICATIONS THAT THE WORK PERFORMED UNDER THE CONTRACT SHALL RESULT IN A COMPLETE OPERATING SYSTEM IN SATISFACTORY WORKING CONDITION WITH RESPECT TO THE FUNCTIONAL PURPOSES OF THE INSTALLATION. IF THERE ARE ANY DISCREPANCIES REGARDING THE IMPLIED MEANING OF THESE PLANS, THE CONTRACTOR IS DIRECTED TO CONTACT THE CONSULTING ENGINEER IMMEDIATELY.

EASTERN SIERRA ENGINEERING (ESE) RENO. NEVADA 89521 SHAWN W JENKINS, P.E., PROJECT ENGINEER PHONE: (775) 828-7220

- 4. ALL EXCAVATION AND EMBANKMENT SHALL BE IN ACCORDANCE WITH CITY OF SPARKS STANDARDS AND THE GEOTECHNICAL INVESTIGATION AND PAVEMENT DESIGN REPORT PREPARED BY ESE, DATED 9/30/22. THIS REPORT WAS PREPARED FOR THE REGIONAL TRANSPORTATION COMMISSION 4TH STREET RECONSTRUCTION, RTC PROJECT NO. 222029, TO A DEPTH OF 3.5' - 4'.
- THE CONTRACTOR SHALL MAINTAIN ALL EXISTING DRAINAGE FACILITIES WITHIN THE CONSTRUCTION AREA UNTIL NEW DRAINAGE IMPROVEMENTS ARE IN PLACE AND FUNCTIONAL. NO FENCE OR OTHER OBSTRUCTION WHICH INTERFERES WITH DRAINAGE SHALL BE CONSTRUCTED OR ALLOWED WITHIN THE DRAINAGE/STORM
- 6. THE CONTRACTOR SHALL TAKE ALL NECESSARY AND PROPER PRECAUTIONS TO PROTECT ADJACENT PROPERTIES FROM ANY AND ALL DAMAGE THAT MAY OCCUR FROM STORM WATER RUNOFF AND/OR DEPOSITION OF DEBRIS RESULTING FROM ANY AND ALL WORK IN CONNECTION WITH PROJECT SCOPE.
- SHOULD ANY PREHISTORIC OR HISTORIC REMAINS OR ARTIFACTS BE DISCOVERED DURING CONSTRUCTION, WORK SHALL TEMPORARILY BE HALTED AT THE SPECIFIC SITE AND THE STATE HISTORIC PRESERVATION OFFICE OF THE DEPARTMENT OF MUSEUMS, LIBRARY AND ARTS, SHALL BE NOTIFIED TO RECORD AND PHOTOGRAPH THE SITE. THE PERIOD OF TEMPORARY DELAY SHALL BE LIMITED TO A MAXIMUM OF TWO (2) WORKING DAYS FROM THE DATE OF NOTIFICATION
- WORK IN PUBLIC STREETS, ONCE BEGUN, SHALL BE PROSECUTED TO COMPLETION WITHOUT DELAY SO AS TO PROVIDE MINIMUM INCONVENIENCE TO ADJACENT PROPERTY OWNERS AND TO THE TRAVELING PUBLIC. THE CONSTRUCTION OF STREET IMPROVEMENTS SHALL ALLOW FOR THE PERPETUATION OF ALL EXISTING LEGAL ACCESSES AND EXISTING DRIVEWAYS. LOCATION AND WIDTH OF ALL LEGAL ACCESSES AND DRIVEWAYS SHALL BE IN ACCORDANCE WITH THE STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION FOR THE CITY OF SPARKS.
- PRIOR TO FINAL ACCEPTANCE AND BOND RELEASES, A CERTIFIED LEGIBLE AS-BUILT DRAWING MUST BE SUBMITTED TO THE CITY OF SPARKS. AS-BUILT DRAWING MUST SHOW ALL CHANGES AND ACTUAL FIELD LOCATIONS. THE CONTRACTOR IS RESPONSIBLE TO PROVIDE AN AS-BUILT DRAWING SHOWING ALL CHANGES AND ACTUAL FIELD LOCATIONS. IN THE ABSENCE OF CHANGES, A COPY OF APPROV DRAWINGS WILL BE REQUIRED STATING "INSTALLED AS PER DRAWINGS" AND
- 10. CONTRACTOR SHALL PROVIDE ALL NECESSARY HORIZONTAL AND VERTICAL TRANSITION BETWEEN NEW CONSTRUCTION AND EXISTING SURFACES TO PROVIDE FOR PROPER DRAINAGE AND OF INGRESS AND EGRESS TO SAID CONSTRUCTION. EXTENT OF
- 11. EXISTING UTILITIES ARE LOCATED ON PLANS FOR THE CONVENIENCE OF THE CONTRACTOR ONLY. THE CONTRACTOR SHALL BEAR FULL RESPONSIBILITY FOR THE PROTECTION OF UTILITIES AND THE ENGINEER BEARS NO RESPONSIBILITY FOR UTILITIES NOT SHOWN ON THE PLANS OR NOT IN THE LOCATION SHOWN ON THE PLANS. THIS INCLUDES ALL SERVICE LATERALS OF ANY KIND
- 12. CALL UNDERGROUND SERVICE ALERT NORTH (USA NORTH 811) FOR UTILITY
- 13. EXACT LOCATION OF ALL SAW-CUT LINES SHALL BE DETERMINED IN THE FIELD BY THE ENGINEER FOR THE CITY OF SPARKS.
- 14. CONTRACTOR SHALL OBTAIN WRITTEN APPROVAL FROM THE ENGINEER PRIOR TO LISING A STAGING AREA WITHIN A RESIDENTIAL NEIGHBORHOOD. NO MATERIALS OF ANY KIND SHALL BE STOCKPILED OR CONSTRUCTION EQUIPMENT PARKED ON CONCRETE OR ASPHALT SURFACES WITHOUT APPROVAL BY THE ENGINEER.
- 15. ALL EXCESS OR UNSUITABLE MATERIAL SHALL BE DISPOSED OF IN ACCORDANCE
- 16. BEFORE ANY WORK IS STARTED IN STREET RIGHT-OF-WAY, THE CONTRACTOR SHALL INSTALL ALL ADVANCE WARNING SIGNS FOR THE CONSTRUCTION ZONE. THE CONTRACTOR SHALL INSTALL TEMPORARY STOP SIGNS AT ALL NEW STREET ENCROACHMENTS INTO EXISTING PUBLIC STREETS IMMEDIATELY AFTER THE FIRST GRADING WORK IS ACCOMPLISHED AND SHALL MAINTAIN SAID SIGNS LINTIL PERMANENT SIGNS ARE INSTALLED. ALL CONSTRUCTION SIGNING, BARRICADING, AND TRAFFIC DELINEATION SHALL CONFORM TO THE "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES" — CURRENT EDITION AND BE APPROVED BY THE CITY OF SPARKS BEFORE CONSTRUCTION BEGINS.
- 17. PROTECTION AND REPLACEMENT OF SURVEY MONUMENTS OR PROPERTY STAKES NOT DELINEATED ON THE CONTRACT DRAWINGS SHALL BE THE CONTRACTOR'S RESPONSIBILITY. REPLACEMENT OF SURVEY MONUMENTS OR PROPERTY STAKES SHALL BE DONE TO THE CITY OF SPARKS SURVEY SECTION'S SATISFACTION.
- 18. THE CONTRACTOR SHALL TAKE REASONABLE MEASURES TO PROTECT EXISTING IMPROVEMENTS FROM DAMAGE AND ALL SUCH IMPROVEMENTS DAMAGED BY THE CONTRACTOR'S OPERATION SHALL BE REPAIRED OR RECONSTRUCTED TO THE ENGINEER'S SATISFACTION AT THE EXPENSE OF THE CONTRACTOR.

- 19. THE CONTRACTOR SHALL BE RESPONSIBLE FOR IMMEDIATE OFF-SITE DISPOSAL OF ALL BITUMINOUS PAVEMENT, CONCRETE AND REINFORCEMENT, AND SPOILS NOT NEEDED FOR BACKFILL AS REQUIRED BY THE ENGINEER AND PER SPECIFICATIONS.
- THE CONTRACTOR SHALL MAINTAIN ACCESS TO AT LEAST ONE DRIVEWAY TO EACH
- THE CONTRACTOR SHALL SUBMIT, FOR APPROVAL, A TRAFFIC CONTROL PLAN TO THE ENGINEER FOR THE CITY OF SPARKS PRIOR TO PERFORMING ANY WORK IN THE PUBLIC RIGHT-OF-WAY.
- ANY STRIPING DAMAGED OR REMOVED DURING CONSTRUCTION SHALL BE REPLACED AT THE CONTRACTORS EXPENSE TO THE SATISFACTION OF THE ENGINEER.
- IN ACCORDANCE WITH THE NEVADA DIVISION OF ENVIRONMENTAL PROTECTION (NDEP) GENERAL PERMIT FOR CONSTRUCTION ACTIVITIES; THE CONTRACTOR SHALL HAVE A STORM WATER POLLUTION PREVENTION PLAN (SWPPP) ON SITE AT ALL TIMES. THE CONTRACTOR IS RESPONSIBLE TO MAINTAIN THE BMP'S, CONDUCT SELF INSPECTIONS.

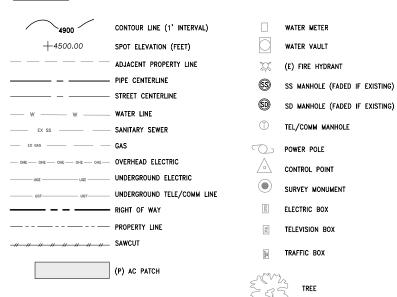
PUBLIC WORKS UTILITY NOTES

- THE CONTRACTOR SHALL SUPPORT AND PROTECT EXISTING UTILITIES WITHIN THE TRENCH SECTION TO THE SATISFACTION OF THE OWNER AGENCY. SUFFICIENT TIME SHALL BE ALLOWED TO THE OWNER AGENCY TO EXECUTE THE PROPER REMOVAL, RELOCATION, OR ADJUSTMENT OF ITS UTILITIES.
- 2. THE CONTRACTOR SHALL NOTIFY RESIDENTS 48 HOURS PRIOR TO REQUIRING ACCESS TO PRIVATE PROPERTY FOR CONSTRUCTION OF SEWER LINES, MANHOLES AND/OR
- 3. CONTRACTOR IS REQUIRED TO OBTAIN A DUST CONTROL PERMIT AND MAINTAIN A DUST CONTROL PROGRAM INCLUDING WATERING OF OPEN AREAS. THE CONTRACTOR SHALL ADHERE TO WASHOE COUNTY AIR POLLUTION REGULATIONS, SECTION 040.030.
- 4. CONTRACTOR SHALL MAINTAIN AN ON-GOING PROCESS FOR REMOVAL OF ALL SPILLAGE OF EXCAVATED MATERIAL ON ALL PAVED STREETS.
- 5. PERMITS, APPROVED PLANS, AND BARRICADE PLANS FOR THIS WORK MUST BE ON
- 6. INSPECTIONS ARE REQUIRED. THE CONTRACTOR SHALL NOTIFY ALL EFFECTED PUBLIC ENTITIES 48 HOURS MINIMUM PRIOR TO COMMENCEMENT OF WORK.
- 7. COMPACTION TESTS ARE REQUIRED. SOIL TESTING SHALL COMPLY WITH SECTION 336 OF THE STANDARD SPECIFICATIONS.
- 8. A TEMPORARY PATCH IS TO BE IN PLACE AT THE END OF EACH WORK DAY WHERE THE BACKFILL IN THE TRENCH HAS BEEN COMPLETED AND PRIOR TO OPENING THE WORK AREA BACK TO THE TRAFFIC AND IS TO BE MAINTAINED BY THE CONTRACTOR. A PERMANENT PATCH IS TO BE IN PLACE WITHIN THIRTY (30) DAYS AFTER THE INSTALLATION OF THE TEMPORARY PATCH.
- 9. ALL TRENCH CROSSINGS AND BACKFILL SHALL MEET THE STANDARD SPECIFICATIONS
- 10. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTION OF ALL MANHOLES AND PIPELINES DURING THE LIFE OF THE CONTRACT. THE CONTRACTOR SHALL SUBMIT A MANHOLE PROTECTION PLAN PRIOR TO CONSTRUCTION.
- CONTRACTOR TO USE CONTAINMENT DEVICES IN ALL MANHOLES AND CATCH BASINS DURING CONSTRUCTION. CONTRACTOR TO PROTECT CATCH BASINS PER APPROVED SWPPP OR AS PER DETAIL.
- 12. INSTALL TMWA WATER SECTION REPLACEMENT, CONTRACTOR SHALL NOTIFY TMWA A MINIMUM OF 48 HOURS PRIOR TO SECTION REPLACEMENTS. SECTION REPLACEMENTS MAY REQUIRE HORIZONTAL AND/OR VERTICAL REALIGNMENT. PRIOR TO CONSTRUCTION, CONTRACTOR SHALL POTHOLE AND COORDINATE WITH THWA AND THE ENGINEER TO DETERMINE ALIGNMENT. IF A SECTION REPLACEMENT IS NOT REQUIRED, A SLURRY BACKFILL MAY BE REQUIRED. SEE SPECIFICATION SECTION 500 FOR THWA WATER CONSTRUCTION.
- 13. SEWER MAIN OR SEWER LATERAL CROSSINGS UNDER ANY TRANSITE OR CAST IRON MAINS MAY BE REQUIRED TO BE BACKFILLED WITH AN APPROVED SLURRY UNLESS OTHERWISE APPROVED BY THE ENGINEER.
- 14. SLURRY WATER MAIN TO SPRING LINE IF SEWER LATERAL GOES UNDER WATER MAIN OR IF ABOVE WATER MAIN SLEEVE SEWER LATERAL 10' ON EACH SIDE OF WATER MAIN OR SLURRY ENCASEMENT SEWER LATERAL 10' ON EACH SIDE OF WATER MAIN.

TRAFFIC NOTES

- 1. ANY EXISTING TRAFFIC CONTROL DEVICES AND, OR SIGNS SHALL BE MAINTAINED DURING THE PERIOD OF CONSTRUCTION, AND SHALL BE REPOSITIONED, AS REQUIRED, PER THE ENGINEER, UPON COMPLETION OF THE PROJECT. CONTRACTORS ARE RESPONSIBLE FOR SUBMITTING TRAFFIC CONTROL/BARRICADING PLANS NOT LESS THAN 3 WORKING DAYS BEFORE OBSTRUCTING
- LOCATION AND DESCRIPTION OF TEMPORARY TRAFFIC CONTROL DEVICES, STREET STRIPING, STREET NAME SIGNS, AND TRAFFIC SIGNALS MUST BE SHOWN ON TRAFFIC CONTROL PLANS SUBMITTED TO THE CITY OF SPARKS FOR APPROVAL. ALL TRAFFIC AND STREET NAME SIGNS MUST COMPLY WITH M.U.T.C.D. STANDARDS.
- TRAFFIC, SCHOOL, OR STREET SIGNS OF ANY KIND ARE NOT TO BE MOVED FOR ANY REASON WITHOUT FIRST OBTAINING PERMISSION FROM THE CITY OF SPARKS, EXCEPT AS SHOWN ON THESE PLANS. OR AS APPROVED BY THE ENGINEER.
- 4. THIS PLAN DOES NOT AUTHORIZE CLOSURE OF ANY ROAD OR STREET.

LEGEND



SURVEY NOTES-WAITING FOR SURVEY

1. FIELD SURVEY CONDUCTED ON DECEMBER 8, 2021 BY:

BATTLE BORN VENTURES 600 GLEESON WAY SPARKS, NV 89431 775-813-4934

- 2. THE LOCATION OF UNDERGROUND UTILITIES SHOWN HEREON ARE FROM SURFACE APPARENT MARKINGS AND FEATURES. UTILITY LOCATIONS ARE SHOWN ONLY FOR CONVENIENCE OF THE CONTRACTOR. THE CONTRACTOR SHALL BEAR FULL RESPONSIBILITY FOR THE PROTECTION OF THE UTILITIES AND BATTLE BORN VENTURES BEARS NO RESPONSIBILITY FOR UTILITIES NOT SHOWN HEREON OR NOT IN THE LOCATION SHOWN HEREON. THIS INCLUDES ALL SERVICE LATERALS OF ANY KIND.
- 3. CALL UNDERGROUND SERVICE ALERT NORTH (USA NORTH 811) FOR UTILITY LOCATIONS PRIOR TO

BASIS OF BEARINGS:

NORTH AMERICAN DATUM OF 1983/94 (NAD 83/94), NEVADA STATE PLANE WEST ZONE. AS DETERMINED WITH NORTH AMERICAN DATUM OF 1985/94 (NAD 83/94), NEVADA STATE PLANE WEST ZONE. AS DELEMINED WITH REAL TIME KINEMATIC (RIK) GPS OBSERVATIONS, OBSERVED ON DECEMBER 8, 2021, USING TRIMBLE R8 RECEIVER WITH CORRECTION FROM NORTHWEST RENO "RNO1" CONTINUOUSLY OPERATING REFERENCE STATION (CORS) BEING PART OF THE NORTHERN NEVADA REGIONAL MAPPING NETWORK. MODIFIED BY A COMBINATION FACTOR OF 1.0001979390. ALL DIMENSIONS ARE U.S. SURVEY FOOT GROUND DISTANCES.

"RNO1" STATE PLANE GRID, NV WEST ZONE "RNO1" GROUND COORDINATE N - 14869133.44 E - 2257346.81 N - 14872076.62 E - 2257793.63 ELEV. - 5102.115 (NAVD 88) ELEV - 5102.115 (NAVD 88)

BASIS OF ELEVATIONS:

LENGTH OF VERTICAL CURVE

MAXIMUM MAIL BOX

MANHOLE

MINIMUM

NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88) AS DETERMINED WITH REAL TIME KINEMATIC (RTK) GPS OBSERVATIONS, OBSERVED ON DECEMBER 8, 2021, USING TRIMBLE R8 RECEIVER WITH CORRECTION FROM NORTHWEST RENO "RNO1" CONTINOUSLY OPERATING REFERENCE STATION (CORS) BEING PART OF THE NORTHERN NEVADA REGIONAL MAPPING NETWORK. ELEVATIONS WERE REDUCED USING THE GEOID 12A MODEL PROVIDED BY THE NATIONAL GEODETIC SURVEY.

ABBREVIATIONS

	AREA	NDD	NO DIRECT DAYMENT
A AC	AREA	NDP NO	NO DIRECT PAYMENT NUMBER
	ASPHALTIC CONCRETE	OHE	OVERHEAD POWER LINE
ACP	ASBESTOS CONCRETE PIPE/TRANSITE PIPE		
ADA	AMERICANS WITH DISABILITIES ACT	(P)	PROPOSED
BC	BEGINNING OF CURB OR BACK OF CURB	PC	POINT OF CURVATURE
BDRY	BOUNDARY	PCC	PORTLAND CEMENT CONCRETE
BEG	BEGIN	PE	POLYETHYLENE PIPE
ВМ	BENCHMARK	PED	PEDESTRIAN
BVC	BEGINNING OF VERTICAL CURVE	PI	POINT OF INTERSECTION
BW	BACK OF SIDEWALK	PL	PROPERTY LINE
(C)	COMMERCIAL	PP	POWER POLE
C&G	CURB AND GUTTER	POC	POINT OF CONNECTION
CATV	CABLE TV / FIBER LINE	PRC	POINT OF REVERSE CURVE
CB	CATCH BASIN	PT	POINT OF TANGENT
CIP	CAST IRON PIPE	PVC	POLYVINYL CHLORIDE PIPE
CL	CENTERLINE	PVI	POINT OF VERTICAL INTERSECTION
CMP	CORRUGATED METAL PIPE	(R) DWY	RESIDENTIAL DRIVEWAY
COMM	COMMUNICATION	RAD	RADIUS
CONC	CONCRETE	RCP	REINFORCED CONCRETE PIPE
CONST	CONSTRUCT, CONSTRUCTION	R, RT	RIGHT
DI	DROP INLET	R/W, ROW	RIGHT OF WAY
DIA	DIAMETER	s ·	SOUTH, SLOPE
DIP	DUCTILE IRON PIPE	SS	SANITARY SEWER
DMH	DROP MANHOLE	SSC0	SANITARY SEWER CLEANOUT
DWY	DRIVEWAY	SSMH	SANITARY SEWER MANHOLE
E	EAST	SD	STORM DRAIN
(E), EXIST	EXISTING	SDMH	STORM DRAIN MANHOLE
ÈC	END OF CURVE	SF	SQUARE FOOT
EB	ELECTRIC BOX	SHT	SHEET
EG	EXISTING GROUND	STA	STATION
EL. ELEV	ELEVATION	STD	STANDARD
EP, EOP	EDGE OF PAVING	SW	SIDEWALK
EVC	END OF VERTICAL CURVE	T	TANGENT DISTANCE
FG	FINISHED GRADE	T. TEL	TELEPHONE
FH	FIRE HYDRANT	TBC	TOP BACK OF CURB
FL	FLOWLINE	TR	TRANSITE PIPE/ASBESTOS CONCRETE
F-0	FIBER OPTIC	•••	PIPE
FT	FOOT	TYP	TYPICAL
G	GAS	ÜB	UTILITY BOX
GB	GRADE BREAK	ÜĞE	UNDERGROUND ELECTRIC LINE
GV	GAS VALVE	UGT	UNDERGROUND TELEPHONE LINE
HGT	HEIGHT	VC.	VERTICAL CURVE
HORIZ.	HORIZONTAL	VERT	VERTICAL
HP.	HIGH POINT	VG	VALLEY GUTTER
ΙË	INVERT ELEVATION	w	WEST, WATER
IN	INCH	WМ	WATER METER
Ľ	LENGTH, LEFT	wv	WATER VALVE
LF.	LINEAL FEET		





DRAIN **ABBREVIATIONS**

CITY OF SPARKS STREET SEWER & STORM LEGGEND, NOTES, **4TH**

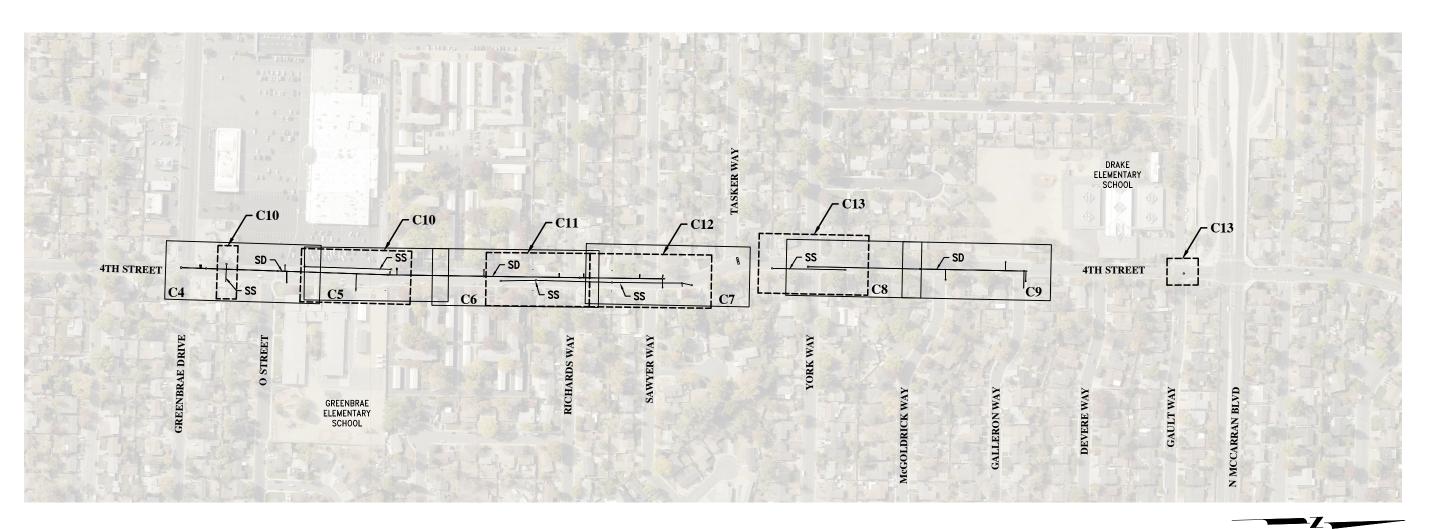
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22131 AS SHOWN 11-11-2022 SHEET No.

OF **15**



SHEET INDEX



11-11-2022 ed: BF, BM, DB
By: JC, MO
ed By: SWJ
:: 22131
AS SHOWN
11-11-2022
SHEET No.

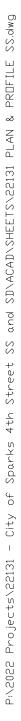
C3 OF 15

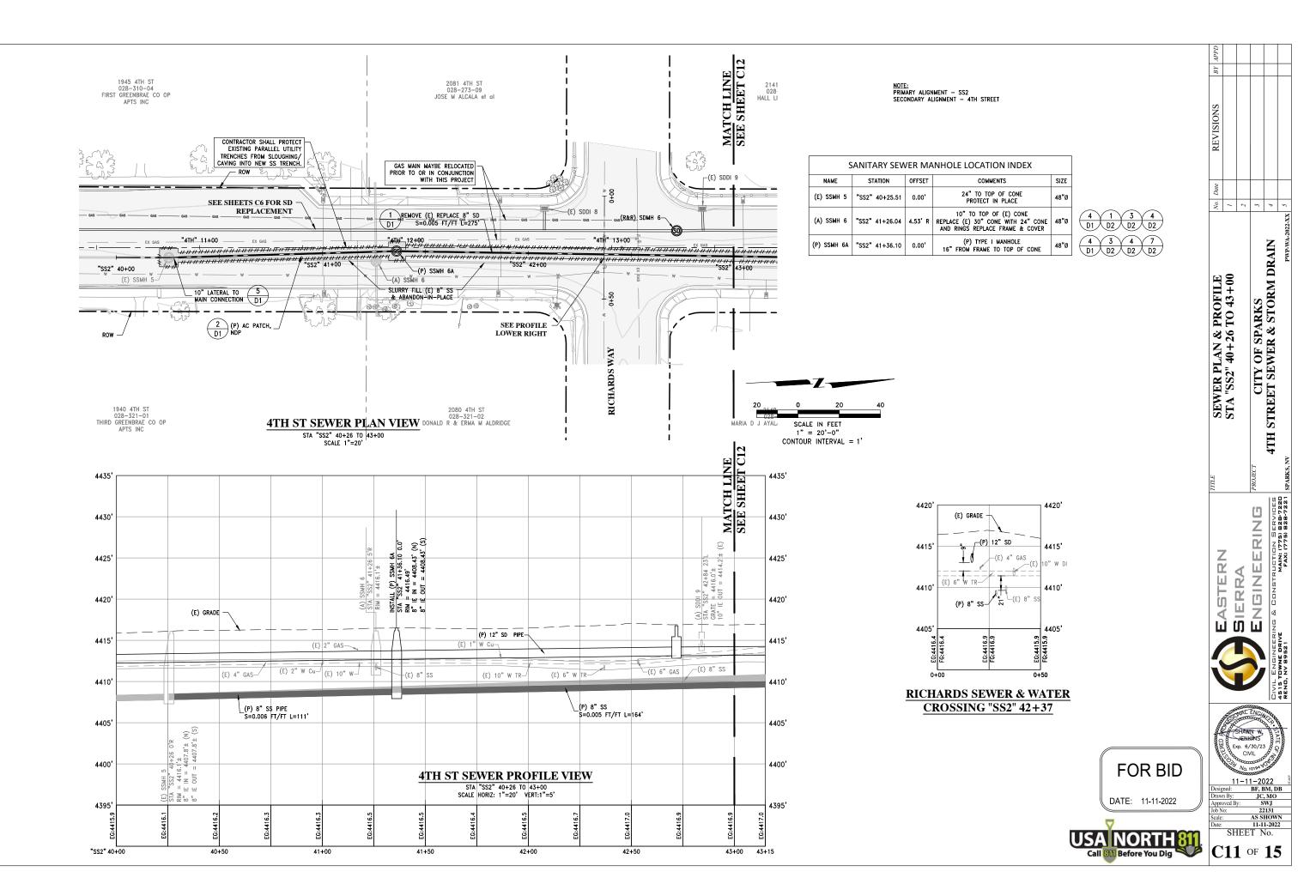
SCALE IN FEET 1" = 150'-0"

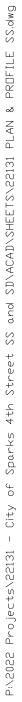
FOR BID

DATE: 11-11-2022

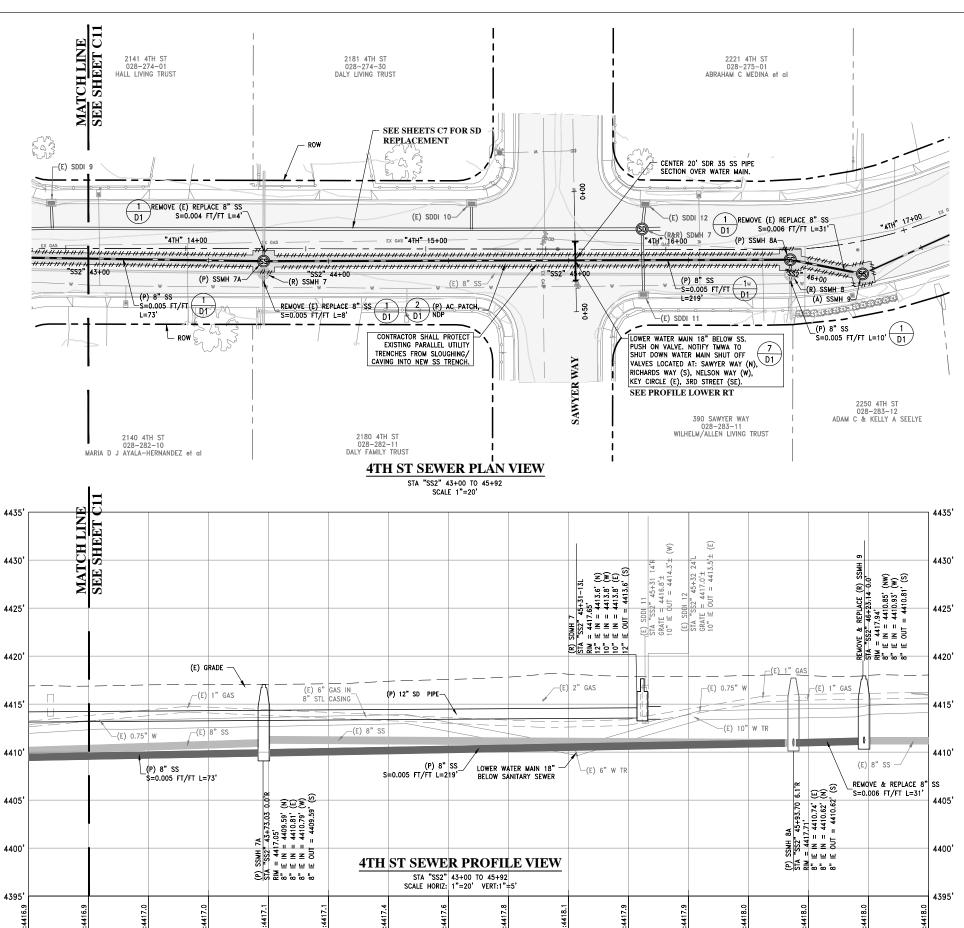
USA NORTH Call M Before You Dig







"SS2" 42+75



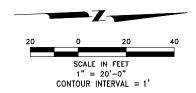
44+00

44+50

45+00

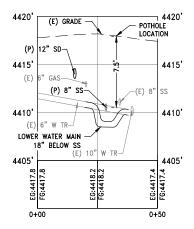
NOTE: PRIMARY ALIGNMENT - SS2 SECONDARY ALIGNMENT - 4TH STREET

S	ANITARY SEW	ER MA	NHOLE LOCATION INDEX		
NAME	STATION	OFFSET	COMMENTS	SIZE	
(P) SSMH 7A	"SS2" 43+73.03	0.00' R	(P) TYPE I MANHOLE 16" FROM FRAME TO TOP OF CONE	48ӯ	4 1 3 A D2 D2 D2 D
(R) SSMH 7	"SS2" 43+73.09	5.00' R	REMOVE (E) SSMH	48ӯ	
(P) SSMH 8A	"SS2" 45+92.44	0.00'	(P) TYPE 1 MANHOLE 16" FROM FRAME TO TOP OF CONE	48ӯ	4 1 3 A D D D D D D D D D D D D D D D D D D
(R) SSMH 8	"SS2" 45+93.70	6.09' R	REMOVE (E) SSMH	48ӯ	
(A) SSMH 9	"SS2" 46+23.14	0.00'	12" TO TOP OF (E) CONE REPLACE (E) 18" CONE W/ 12" CONE REPLACE FRAME & COVER	48ӯ	4 3 4 D1 D2 D2 D



46+50

46+00



SAWYER SEWER & WATER **CROSSING "SS2" 45+03**







SEWER PLAN & PROFILE STA "SS2" 43+00 TO 45+92 CITY OF SPARKS 4TH STREET SEWER & STORM DRAIN

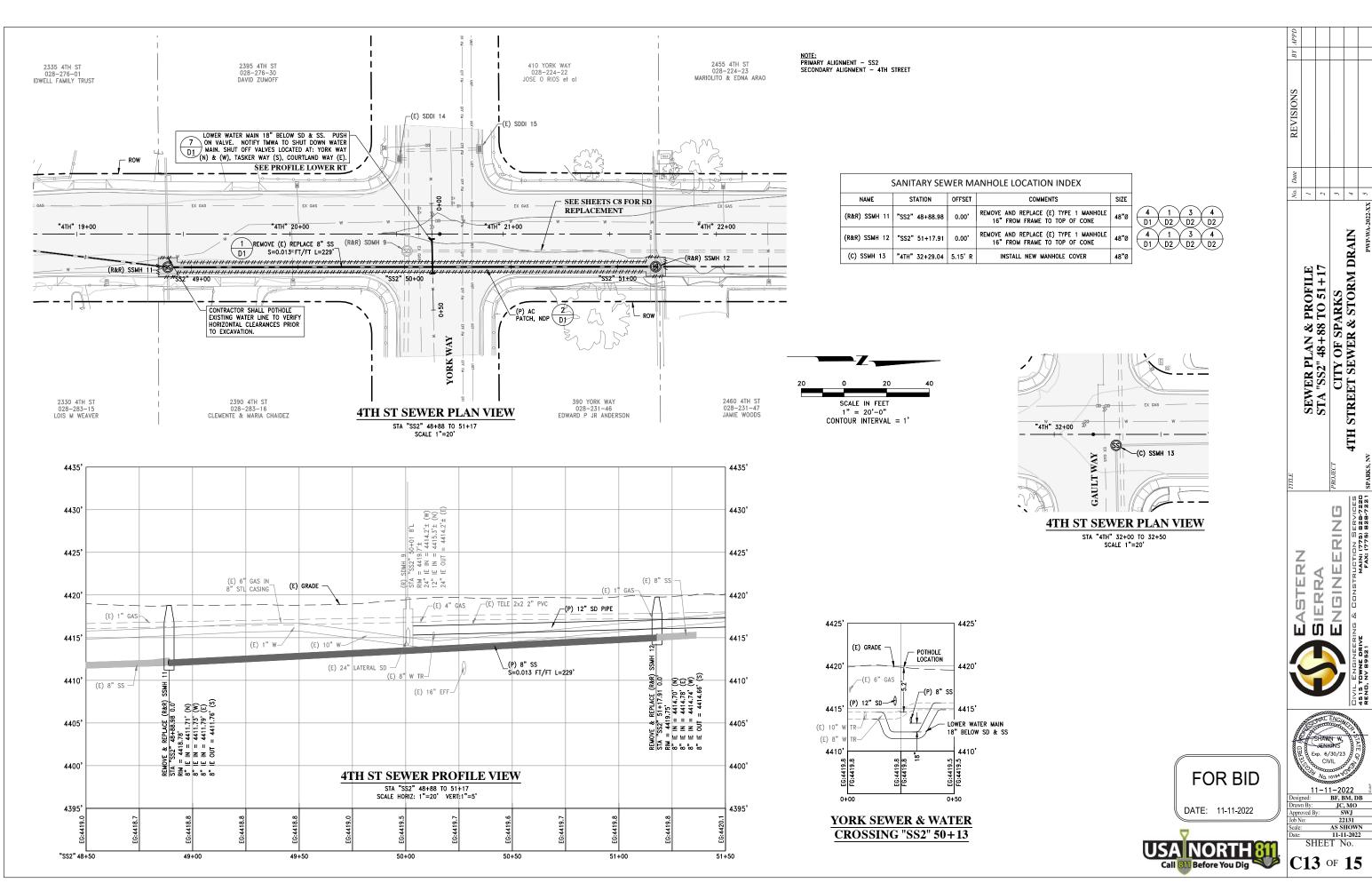
& CONSTRUCTION SERVICES MAIN: (775) 828-7220 FAX: (775) 828-7221

NGINEERING

STERN

EASTER SIERRA ENGINE





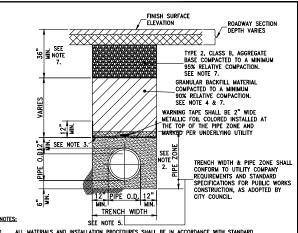
FINISHED GRADE

SDR 35 ELBOW

LATERAL

SDR 35 TEE.

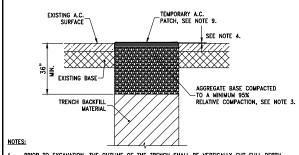
STORM DRAIN



- BEDDING MATERIAL SHALL CONFORM TO OWNING-UTILITY COMPANY REQUIREMENTS AS APPROVED BY THE CITY OF SPARKS. FOR CITY-OWNED UTILITIES, BEDDING MATERIAL SHALL BE CLASS A OR C, COMPACTED TO MINIMUM 90% RELATIVE COMPACTION. MATERIALS SHALL CONFORM TO SSPWC SECTION 200, AS ADOPTED BY CITY COUNCIL.
- CLASS C BEDDING REQUIRES INSTALLATION OF GEOTEXTILE FABRIC BETWEEN PIPE ZONE AND BACKFILL MATERIAL. GEOTEXTILE FABRIC SHALL BE MIRAFI 180N OR APPROVED EQUAL.
- 5. ALL EXCAVATIONS SHALL CONFORM TO THE LATEST O.S.H.A. REQUIREMENTS.
- . EXISTING PIPE TO BE ABANDONED SHALL BE GROUT FILLED OR COMPLETELY REMOVED.
- MINIMUM BACKFILL DEPTH REQUIREMENT IS FOR TRENCHING IN EXISTING PAVED STREETS. TRENCHING FOR <u>NEW DEVELOPMENT</u> WHERE STREETS HAVE NOT YET BEEN CONSTRUCTED, BACKFILL MATERIAL SHALL BE TYPE 2, CLASS B OR CLASS E AND COMPACTED TO MINIMUM 90% RELATIVE COMPACTION. MATERIALS SHALL CONFORM TO SSPWC SECTION 200, AS ADOPTED BY CITY COUNCIL.

STANDARD DETAI	LS FOR PUBLIC WORKS CONSTRUCTION	DRAWING No.
O City of	TRENCH	S-117
Sparks	EXCAVATION/BACKFILL	
	=, (e, (, , (, e, , e, , e, , e, , e, ,	APPROVED BY: JE DATE: 1/2020



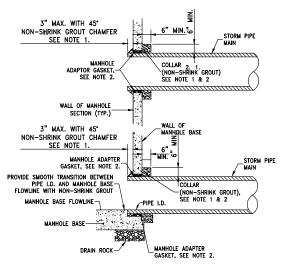


- PRIOR TO EXCAVATION, THE OUTLINE OF THE TRENCH SHALL BE VERTICALLY CUT FULL DEPTH THROUGH THE EXISTING ASPHALT SURFACE.
- CARE SHALL BE EXERCISED TO PREVENT SLOUGHING AND OVERBREAK. IF THE TRENCH SLOUGHS, THE SURFACE SHALL BE WIDENED TO ELIMINATE THE UNDERMINED SECTION OF ASPHALT.
- AGGREGATE BASE UNDER TEMPORARY PATCH SHALL BE A MINIMUM THICKNESS OF 36 INCHES BELOW THE EXISTING AC SURFACE. AGGREGATE BASE MATERIAL UNDER TEMPORARY PATCH SHALL BE TYPE 2 CLASS B CRUSHED AGGREGATE BASE. MATERIALS SHALL CONFORM TO SSPWC SECTION 200, AS ADOPTED BY CITY COUNCIL.
- TEMPORARY PATCHES SHALL BE PLACED AND COMPACTED. THE COMPACTED PATCH SHALL BE APPROXIMATELY 1/8" TO 1/4" ABOVE THE LEVEL OF THE ADJACENT PAYEMENT. IF NOT PATCHED WITHIN 24 HOURS AFTER BACKFIGUING, THE CITY MAY PATCH AND BACK-CHARGE THE PERMITTEE FOR
- COMPACTION OF BACKFILL, BASE AND A.C. TEMPORARY PATCH SHALL BE PERFORMED WITH APPROVED MECHANICAL TAMPERS. EQUIPMENT WHEEL ROLLING IS NOT PERMITTED.
- ENTIRE AREA SHALL BE CLEANED OF ALL DIRT, DUST, DEBRIS, ETC. BEFORE LEAVING SITE. LEFT UNCLEANED WILL BE CLEANED BY THE CITY AND ALL COSTS BACK-CHARGED TO THE CONTRACTOR.
- ALL EXCAVATIONS SHALL BE COMPLETE OR BACKFILLED AT THE END OF THE SHIFT, INCLUDING TEMPORARY PATCH.
- TEMPORARY PATCH WORK AND PATCH MAINTENANCE SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- ALL TEMPORARY PATCHES ON ALL STREETS SHALL BE HOT-MIX ASPHALT A MINIMUM OF 3" THICK.
- O. PLATES MAY BE USED UPON APPROVAL FROM THE CITY ENGINEER.

D1

STANDARD DETAIL	S FOR PUBLIC WORKS CONSTRUCTION	DRAWING No.			
O City of	TEMPORARY A.C.	S-116			
<i>Sparks</i>	TRENCH PATCH	APPROVED BY: JE DATE: 1/2020			

A.C. PATCH STORM DRAIN PIPE TO MANHOLE CONNECTION SCALE: N.T.S. D1



- NON-SHRINK GROUT SHALL HAVE THE FOLLOWING CHARACTERISTICS: 3000 PSI MIN. COMPRESSIVE STRENGTH AT 28 DAYS, MIN. 6 SACKS OF CEMENT PER CUBIC YARD AND SLUMP AT 1 TO 4 INCHE ALL MATERIAL SHALL COMFORM TO SSPING SECTION 202, AS ADOPTED BY CITY COUNCIL.
- STORM DRAIN PIPE CONNECTIONS TO MANHOLE BASES AND SECTIONS REQUIRE AN AGENCY-APPROVED FORM OF SEAL OR WATER STOP AND IS REQUIRED ON ALL STORM DRAIN INSTALLATIONS TO PROVIDE A WATERIGHT CONNECTION. UTILIZE A ROMAC STYLE "LCT" MANHOLE ADAPTER GASKET OR APPROVED EQUAL IN CONJUNCTION WITH THE NON-SHRINK GROUT.
- A RESILIENT FLEXIBLE CONNECTOR INSTALLED IN ACCORDANCE WITH STANDARD DETAIL S-211C MAY BE USED TO SATISFY THE REQUIREMENTS OF NOTE 2 ABOVE.
- ALL PIPE OPENINGS TO NEW MANHOLES MUST BE EITHER CAST-IN-PLACE OR PRE-FORMED AND PIPE OPENINGS TO EXISTING MANHOLES MUST BE CORE DRILLED.

STANDARD DETAIL	S FOR PUBLIC WORKS CONSTRUCTION	DRAWING No.
City of	STORM DRAIN PIPE TO MANHOLE CONNECTION	S-211B
77 001 100	WANTOLL CONNECTION	APPROVED BY: JE DATE: 1/2020



NOTES:

PPROVED BY: JE DATE: 1/2020 SANITARY SEWER PIPE TO

MANHOLE CONNECTION SCALE: N.T.S. D1

مة.MIN "6

SECTION (TYP.)

WALL OF MANHOLE BASE

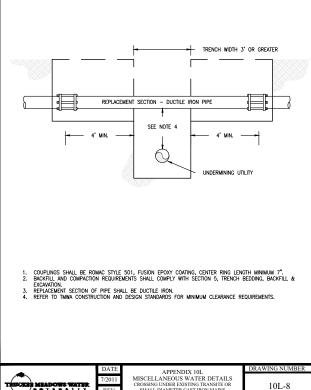
-PIPE I.D.

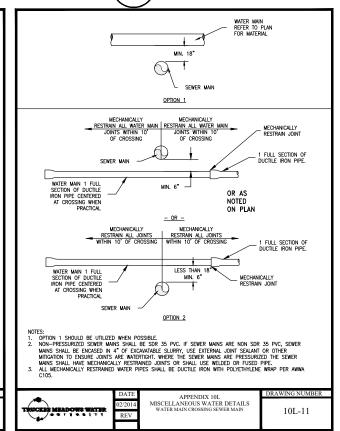
SEWER PIPE

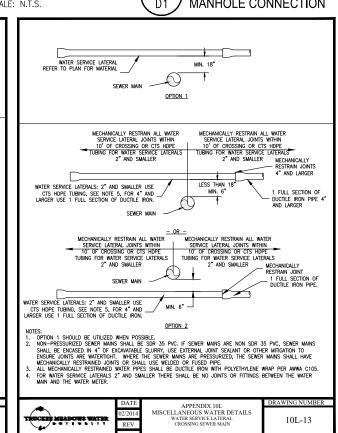
DRAWING No.

S-211A

COLLAR







3" MAX. WITH 45°

NON-SHRINK GROUT CHAMFER
SEE NOTE 1.

PROVIDE SMOOTH TRANSITIO BETWEEN PIPE I.D. AND MANHOLE BASE FLOWLINE.

DRAIN ROCK-

STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION

XXXXXX

SECTION

NON-SHRINK GROUT SHALL HAVE THE FOLLOWING CHARACTERISTICS: 3000 PSI MIN. COMPRESSIVE STRENGTH AT 28 DAYS, MIN. 6 SACKS OF CEMENT PER CUBIC YARD AND SLUMP AT 1 TO 4 INCHES. ALL MATERIAL SHALL CONFORM TO STANDARD SPECIFICATIONS OF PUBLIC WORKS CONSTRUCTION (SSPWC) SECTION 202, AS ADOPTED BY CITY COUNCIL.

SANITARY SEWER PIPE CONNECTION TO MANHOLE SECTIONS (DROP MANHOLES) REQUIRE AN AGENCY-APPROVED FORM OF SEAL OR WATER STOP TO PROVIDE A WATERTIGHT CONNECTION.
UTILIZE A ROWAC STYLE "LCT" MANHOLE ADAPTOR GASKET OR APPROVED EQUAL IN CONJUNCTION
WITELLING. INCREMENT CONTROL OF THE PROVIDED REPORTS OF THE PROVIDED REPORTS

SANITARY SEWER PIPE CONNECTION TO MANHOLE BASE SHALL REQUIRE A RESILIENT FLEXIBLE CONNECTOR INSTALLED IN ACCORDANCE WITH STANDARD DETAIL S-211C.

ALL PIPE OPENINGS TO NEW MANHOLES MUST BE EITHER CAST—IN—PLACE OR PRE—FORMED AND PIPE OPENINGS TO EXISTING MANHOLES MUST BE CORE DRILLED.

SANITARY SEWER PIPE

MANHOLE BASE FLOWLINE-



WATER SERVICE LATERAL CROSSING SEWER MAIN SCALE: N.T.S.



D1

USA NORTH Call **311** Before You Dig

CATCH BASIN TO -

ANGLE VARIABLE

(22.5° MAX.)

SCALE: N.T.S

THE REPORT OF

EXISTING

LATERAL TO MAIN CONNECTION

STORM DRAIN MAIN

CROSSING UNDER TRANSITE WATER MAINS 6

D1

WATER MAIN CROSSING SEWER MAIN

8 D1

JC, MO SWJ 22131 AS SHOWN 11-11-2022 SHEET No. of **15**

CITY OF SPARKS
STREET SEWER & STORM DRAIN

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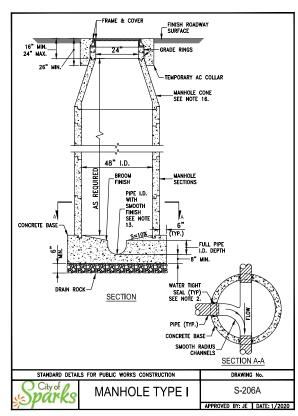
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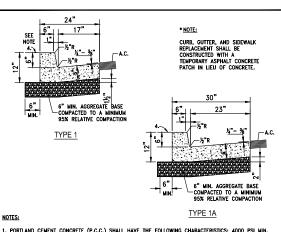
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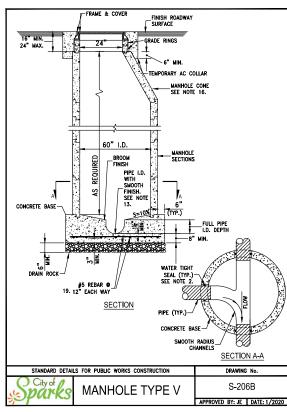




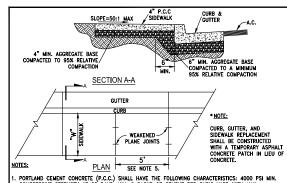
- PORTLAND CEMENT CONCRETE (P.C.C.) SHALL HAVE THE FOLLOWING CHARACTERISTICS: 4000 PSI MIN. COMPRESSIVE STREMGTH AT 28 DAYS, MIN. 6 SACKS OF CEMENT PER CUBIC YARD WITH MAX. WATER-CEMENT RATIO OF 0.45, AIR ENTRANDENT 6% ±1.5%, SLUBP AT 1 TO 4 INCHES. MIX DESIGN SHALL CONFORM TO THE REQUIREMENTS OF SECTION 337 OF STANDARD SPECIFICATIONS OF PUBLIC WORKS CONSTRUCTION (SSEWO). AS ADOPTED BY CITY COUNCIL. CEMENT SHALL BE TYPE II. ALL CEMEN CONCRETE SHALL HAVE A COARSE AGGREGATE GRADATION COMPORNING TO SIZE NO. 67. POLYPROPYLEN OR CELLILLOSE FIBERS SHALL BE ADDED TO THE P.C.C. AT 1.5 LBS. PER CUBIC YARD. ALL MATERIALS SHALL CONFORM TO SSPWC, AS ADOPTED BY CITY COUNCIL.
- WEAKENED PLANE JOINTS SHALL BE EVERY 10 FEET AND LOCATED ON THE BACK, TOP AND FACE OF THE CURB AND THE TOP OF THE GUTTER PAN.
- I. CURB & GUTTER SECTIONS SHALL BE PLACED SEPARATELY FROM SIDEWALK SECTIONS. WHEN SIDEWALK IS NOT REQUIRED DIRECTLY BEHIND THE CURB, BACKFILL TO TOP OF CURB FOR A MORIZONTAL DISTANCE OF 12" FROM BACK FACE OF CURB AND COMPACT TO 90X RELATIVE COMPACTION.

5. FOR REPLACEMENT OF EXISTING CORB AND GOTTER, MATCH EXISTING TIPE.		
STANDARD DETAIL	DRAWING No.	
O City of	P.C.C.	S-109
spurks	CURB & GUTTER	APPROVED BY: JE DATE: 1/2020









- . PORTLAND CEMENT CONCRETE (P.C.C.) SHALL HAVE THE FOLLOWING CHARACTERISTICS: 4000 PSI MIN. COMPRESSIVE STRENGTH AT 28 DAYS, MIN. 6 SACKS OF CEMENT PER CUBIC YARD WITH MAX. WATER-CEMENT RATIO OF C.4.5, ALTERNARMENT 6X ± 1.5X, SLUMP AT 1 TO 4 HICHES. MIX DESIGN SHALL CONFORM TO THE REQUIREMENTS OF SECTION 337 OF STANDARD SPECIFICATIONS OF PUBLIC SMALL CONTOWN THE REQUIREMENTS OF SECTION 397 OF STANDARD SECTIONATION OF FOOLIGE WORKS CONSTRUCTION (SSPWC), AS ADOPTED BY CITY COUNCIL. CEMENT SHALL BE TYPE II. ALL CEMENT CONCRETE SHALL HAVE A COARSE AGGREGATE GRADATION CONFORMING TO SIZE No. 67. POLYPROPYLEME OR CELLULOSE FIBERS SHALL BE ADDED TO THE P.C.C. AT 1.5 LBS. PER CUBIC YARD. ALL MATERIALS SHALL CONFORM TO SSPWC, AS ADOPTED BY CITY COUNCIL.
- : AGGREGATE BASE MATERIAL UNDER SIDEWALKS SHALL BE TYPE 2, CLASS B CRUSHED AGGREGATE BASE. MATERIALS SHALL CONFORM TO SSPWC SECTION 200, AS ADOPTED BY CITY COUNCIL.
- . SIDEWALK WIDTH "W" SHALL BE 4 FT MIN. WITH 60" PASSING SPACE EVERY 200' ON RESIDENTIAL STREETS AND 6 FT MIN. ON COLLECTOR AND ARTERIAL STREETS.
- WEAKENED PLANE JOINTS SHALL BE CONSTRUCTED AT 5 FT INTERVALS AND ACCORDANCE WITH SECTION 312 OF THE SSPWC, AS ADOTED BY CITY COUNCIL.
- . ALL ADJACENT CONCRETE REMOVAL SHALL BE TO NEAT SAW CUT LINES AT RIGHT ANGLES TO NEW SIDEWALK. DOWEL INTO EXISTING ADJACENT CONCRETE SIDEWALK WITH A MINIMUM OF TWO (2) No. 4 REINFORCEMENT BARS EQUALLY SPACED ACROSS WIDTH "W". DOWELS SHALL PENETRATE A MINIMUM OF 4" INTO EXISTING CONC
- . SIDEWALKS SHALL NOT BE POURED MONOLITHICALLY WITH CURBS.
- TUNNELING AND/OR BORING IS NOT ALLOWED.

STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION	DRAWING No.
Sidewalk Detail	S-103
gop varies	APPROVED BY: JE DATE: 1/2020



GENERAL MANHOLE NOTES

- ALL PRECAST MANHOLE COMPONENTS SHALL CONFORM TO ASTM C-478.
- PIPES SHALL NOT PROTRUDE MORE THAN 3" INSIDE MANHOLE SECTION AS MEASURED AT THE OUTSIDE EDGES OF THE PIPE, VERTICALLY ALIGNED WITH THE SPRINGLINE. PIPE CONNECTION TO MANHOLE SHALL BE WATERTION PER STANDARD EDTAILS 3-2115 AND 5-211C.
- MANHOLE BASE SHALL BE PORTLAND CEMENT CONCRETE (P.C.C.) AND SHALL HAVE THE FOLLOWING CHARACTERISTICS: 3000 PSI MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS, MINIMUM 6 SACKS OF CEMENT FER CUBIC TARO WITH SLUMP AT 1 TO 4 INCHES. ALL MATERIAL SHALL CONFORM TO STANDARD SPECIFICATIONS OF PUBLIC WORKS CONSTRUCTION (SSPWC), AS ADOPTED BY CITY COUNCIL PRECAST CONCRETE BASE MAY BE USED IN LEU OF CAST-IN-PLACE BASE.
- TYPE I MANHOLE TO BE UTILIZED FOR PIPE DIAMETERS OF 12" OR SMALLER AND DEPTHS NOT EXCEEDING 18 FEET.
- TYPE Y MANHOLE TO BE UTILIZED FOR PIPE DIAMETERS OF 15" THROUGH 27" OR DEPTHS EXCEEDING 18 FEET.
- MANHOLE MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE REQUIREMENTS OF "MANHOLES AND CATCH BASINS" OF THE STANDARD SPECIFICATIONS.

- EXCAVATION SHALL BE AS NEARLY VERTICAL AS POSSIBLE (SHEET AND SHORE IF SOIL CONDITIONS REQUIRE) IN EXISTING STREET SECTIONS, ALLEY SECTIONS, AND CONFINED AREAS, SUCH AS LIMITED EXSEMENTS OR ADJACENT STRUCTURES.
- D. MANHOLE PRECAST SECTION LENGTH SHALL BE ARRANGED TO FIT THE REQUIRED DEPTH.
- 1. NO LATERALS OR PIPES LESS THAN 8" IN DIAMETER SHALL BE CONNECTED TO THE MANHOLE.
- 2. PRECAST CONCRETE BASE MAY BE USED IN LIEU OF CAST-IN-PLACE BASE.
- 13. MATCH PIPE INVERTS TO MANHOLE INVERTS WHERE PIPES CONNECT TO MANHOLE BASE

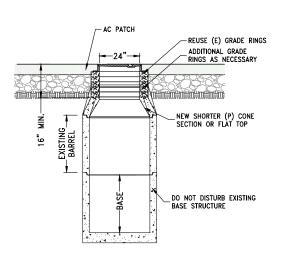
- 6. THE USE OF FLAT TOP MANHOLE CONES REQUIRES PRIOR APPROVAL FROM THE CITY ENGINEER
- 17. PRIOR TO BACKFILLING, ALL MANHOLES SHALL BE VACUUM TESTED PER ASTM C-1244.

- O. WHEN PIPE CONNECTIONS TO EXISTING MANHOLES ARE ALLOWED, THEY SHALL BE MADE BY CORE DRILLING THE MANHOLE AND CONNECTING THE PIPE PENETRATION PER DETAIL S-211A & S-211B

21. TYPE IV MANHOLES SHOULD ONLY BE USED AS APPROVED BY CITY ENGINEER

STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION NOTES - MANHOLE **Darks** TYPE I, TYPE V & TYPE IV

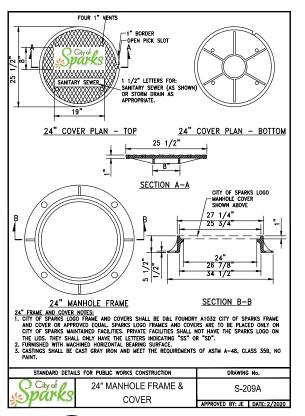




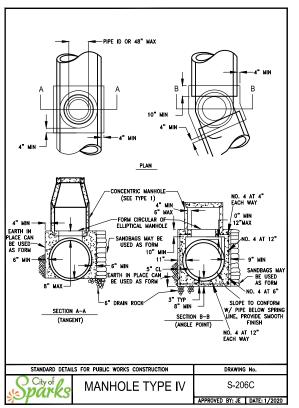
NOTES

- CONTRACTOR SHALL VERIFY EXISTING MANHOLE DIMENSIONS PRIOR TO ORDERING MATERIALS
 REMOVE AND REPLACE EXISTING COME SECTION WITH SHORTER COME AND ADDITIONAL RISER RINGS

















CITY OF SPARKS
STREET SEWER & STORM DRAIN

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ON SERVICES (775) 828-7220 (775) 828-7221

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SHEET No. **D2** OF **15**