OWNER

CITY OF SPARKS, PUBLIC WORKS

431 PRATER WAY

SPARKS, NV 89431

(775) 353-2271

CIVIL ENGINEER

ODYSSEY ENGINEERING, INC.

895 ROBERTA LANE, SUITE 104

SPARKS, NV 89431

(775) 359-3303

ENGINEER OF RECORD

BLACK EAGLE CONSULTING, INC.

1345 CAPITAL BOULEVARD, SUITE A

RENO, NV 89502

(775) 359-6600

CORRUGATED METAL PIPE

CONCRETE

CONSTRUCT

DROP INLET DETAILS

ELEVATION

EXISTING

CONCRETE PIPE

END OF CURVE

EXISTING GRADE FINISH FLOOR FRONT FACE CURB

FINISH GRADE FIRE HYDRANT FLOW LINE

GRADE BREAK GATE VALVE

HORIZONTAL HIGH POINT

INTERSECTION INVERT ELEVATION

LINEAL FEET

LIGHT STANDARD

PAD ELEVATION

POINT OF TANGENT

POINT OF INTERSECTION

POINT OF REVERSE CURVATURE

LOW POINT

MANHOLE

PUSH ON

LENGTH

END VERTICAL CURVE

FLUSH VALVE ASSEMBLY

LIST OF ABBREVIATIONS

CONC.

CONS₇

C.P.

D.W.

ELEV.

EXIST

F.G.

HORIZ

L.S.

P.R.C.

P.O.T.

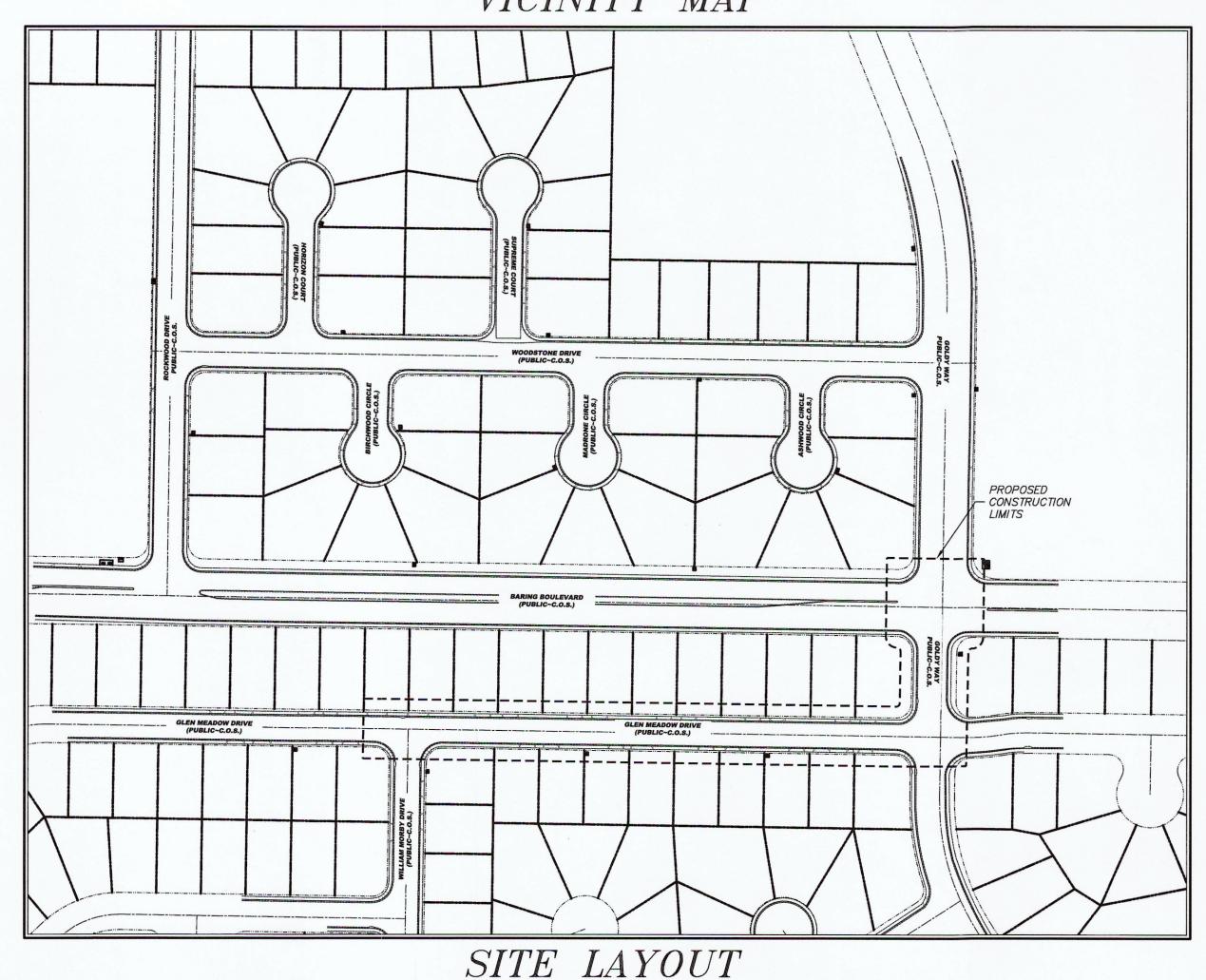
D.I.

CIVIL IMPROVEMENT PLANS CITY OF SPARKS GLEN MEADOW DRIVE STORM DRAIN BID # 21/22-014 / PWP # WA-2022-284

SPARKS, WASHOE COUNTY, NEVADA

BARING BLVD. N. MCCARRAN BLVD PRATER WAY

VICINITY MAP



CIVIL SHEET INDEX

CO.O TITLE SHEET CO.1 GENERAL NOTES C1.1 W. GLEN MEADOW DR. DEMO PLAN C1.2 E. GLEN MEADOW DR. DEMO PLAN C2.1 W. GLEN MEADOW DRIVE PLAN & PROFILE E. GLEN MEADOW DRIVE PLAN & PROFILE C2.3 S. GOLDY WAY PLAN & PROFILE C3.1 PAVEMENT PLAN C4.1 STRIPING PLAN C5.1 DETAIL SHEET C5.2 DETAIL SHEET C5.3 DETAIL SHEET C5.4 DETAIL SHEET C5.5 DETAIL SHEET C5.6 DETAIL SHEET

TMWA SHEET INDEX

W-1 TITLE SHEET W-2 PLAN & PROFILE

NV ENERGY SHEET INDEX

E-1 ELECTRICAL UTILITY RELOCATION SITE PLANE

BASIS OF BEARINGS

TO GROUND FACTOR OF 1.000197939 APPLIED

BENCHMARK

BASED ON NORTH AMERICAN VERTICAL DATUM OF 1988, (NAVD 88) USING THE CITY OF SPARKS GEODETIC CONTROL NETWORK "BM 85" WITH A PUBLISHED ELEVATION OF

FLOOD ZONE:

THE PROPOSED PROJECT IS LOCATED WITHIN A FEMA UNSHADED ZONE X PER FIRM MAP PANELS 332031C3061G WITH AN EFFECTIVE DATE OF MARCH 16, 2009.

ALL CONSTRUCTION SHALL CONFORM TO THE STANDARD SPECIFICATIONS, AND THE LATEST STANDARD DETAILS, FOR PUBLIC WORKS CONSTRUCTION (2012 EDITION AND ANY APPURTENANT SUPPLEMENTS) SPONSORED AND DISTRIBUTED BY RENO. SPARKS. AND WASHOE COUNTY, THE CITY OF RENO PUBLIC WORKS DESIGN MANUAL & SUPPLEMENTAL STANDARD DRAWING DETAILS, REVISED JANUARY, 2009, AND THE GEOTECHNICAL INVESTIGATION ENTITLED "GOLDY WAY AND BARING BOULEVARD STORM DRAIN AND SANITARY SEWER IMPROVEMENTS", PREPARED BY BLACK EAGLE CONSULTING, INCORPORATED., DATED JULY 15TH, 2020.

ENGINEER'S CERTIFICATE

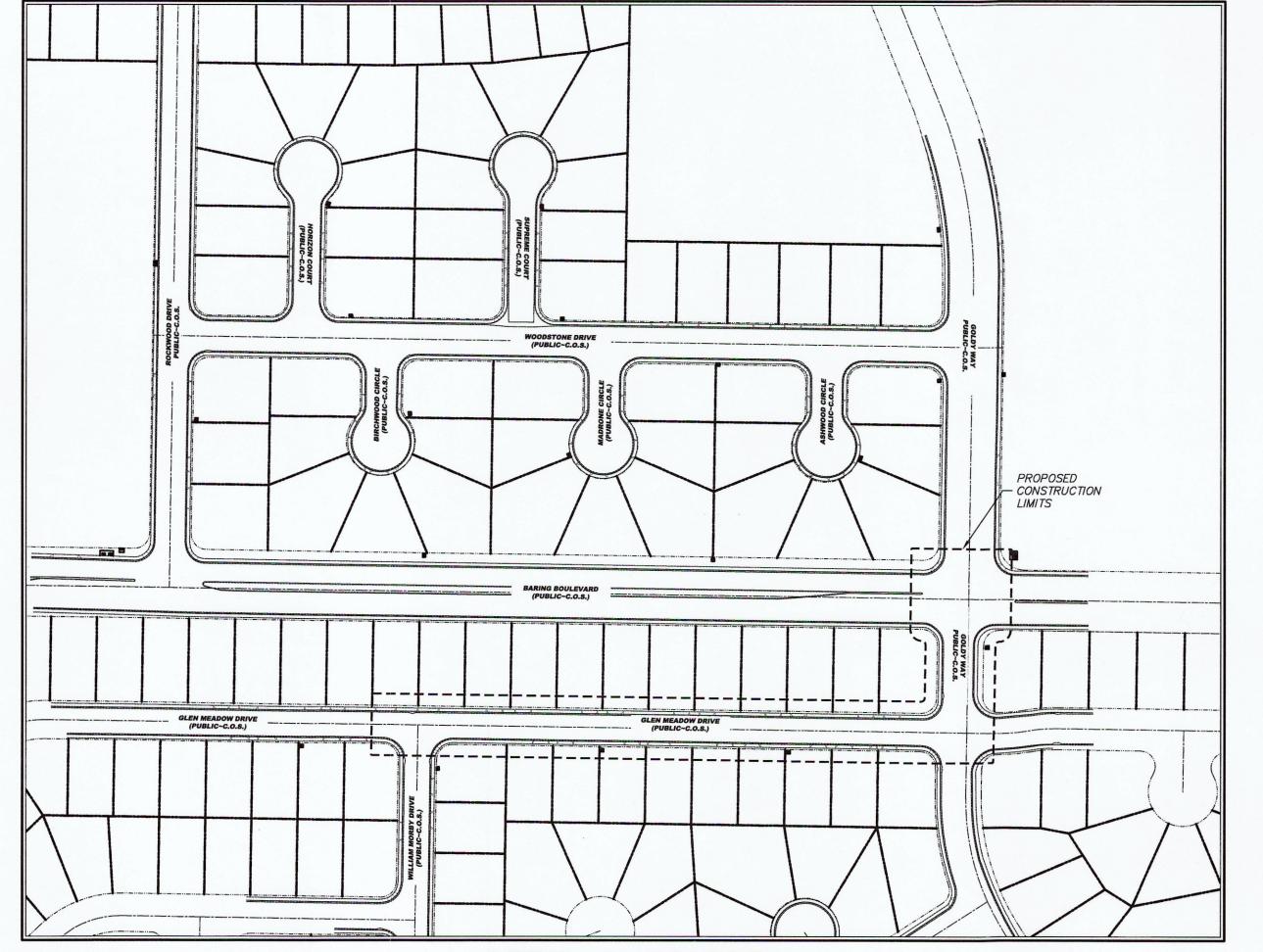
THESE PLANS (SHEETS CO.O OF 15 THRU C5.6 OF 15) HAVE BEEN PREPARED IN ACCORDANCE WITH ACCEPTED ENGINEERING PROCEDURES AND GUIDELINES. AND ARE IN SUBSTANTIAL COMPLIANCE WITH APPLICABLE STATUTES, CITY ORDINANCES, STANDARDS, AND CITY CODE. IN THE EVENT OF CONFLICT BETWEEN ANY PORTION OF THESE PLANS AND CITY CODE, CITY STANDARDS SHALL PREVAIL.

FRANK A. BIDART, P.E.

P.E. #10504

Know what's **below**. Call before you dig.

POLYVINYL CHLORIDE PIPE PROPERTY LINE RADIAL RADIUS RECLAIMED EFFLUENT REF REFERENCE RET. RETURN REINFORCED CONCRETE PIPE RIGHT RIGHT OF WAY STORM DRAIN CLEAN OUT S.S.C.O. SANITARY SEWER CLEAN OUT SANITARY SEWER S.S. S.W. SIDEWALK SHT. STA. STATION S.D. STORM DRAIN **TANGENT** TOP OF CURB TOP OF PAVEMENT TYP. **TYPICAL VERT** VERTICAL V.C. VERTICAL CURVE VERTICAL POINT OF INTERSECTION V.P.I. WATER WASHOE COUNTY WATER SURFACE ELEVATION



March 30, 2022 - 09:08 Dwg Name: H:\COS STORM AND SEWER MASTER CIP\Production Drawings\CIP 6-3\C0.0 - TITLE SHEET.dwg Updated By: eric

ENGINEERING INCORPORATED

ENGTHEER RANK A **BIDART** Exp. 12−31−22*8* Vo. 10504

SCALE HORIZ. ____

VERT. ___ JOB NO. SHEET

CO.0

GENERAL NOTES:

- 1. CONTRACTOR SHALL PROVIDE ALL MATERIALS, EQUIPMENT, LABOR, AND INCIDENTALS REQUIRED TO CONSTRUCT THE IMPROVEMENTS AS SHOWN ON THE IMPROVEMENT PLANS AND ALL WORK SHALL BE ACCOMPLISHED IN STRICT ACCORDANCE WITH THE SPECIFICATIONS SET FORTH IN THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, 2012 (ORANGE BOOK 2012), TMWA ENGINEERING & CONSTRUCTION STANDARDS, NV ENERGY GAS AND ELECTRIC STANDARDS, AND THE PROJECT GEOTECHNICAL INVESTIGATION TITLED "GOLDY WAY AND BARING BOULEVARD STORM AND SANITARY SEWER IMPROVEMENTS, SPARKS, NV", DATED JULY 15, 2020, BY BLACK EAGLE CONSULTING, INC.
- 2. ENGINEER WILL PROVIDE CONSTRUCTION SURVEY STAKING OF CRITICAL POINTS AS IDENTIFIED WITH NORTHING AND EASTING COORDINATES, AND/OR STATION OFFSET COORDINATES IN THE IMPROVEMENT PLANS. THESE POINTS INCLUDE MANHOLE(s), CATCH BASIN(s), VALVE(s), TEE(s), AND OR ELBOWS. ADDITIONAL STAKING AND/OR SURVEY TO CONSTRUCT THE PROJECT, INCLUDING VERTICAL ELEVATION STAKING, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- 3. THESE PLANS, SHEET CO.O OF 19 THROUGH E-1 OF 19 HAVE BEEN PREPARED IN ACCORDANCE WITH ACCEPTED ENGINEERING PROCEDURES AND GUIDELINES, AND ARE IN SUBSTANTIAL COMPLIANCE WITH APPLICABLE STATUTES, CITY ORDINANCES OR STANDARDS, IN THE EVENT OF CONFLICT BETWEEN ANY PORTION OF THESE PLANS AND CITY OF SPARKS, TMWA OR NV ENERGY STANDARDS, THE STANDARDS SHALL APPLY AND THE ENGINEER SHALL BE CONTACTED IMMEDIATELY.
- 4. THE CONTRACTOR SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY: AND THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY, AND NOT BE LIMITED TO NORMAL WORKING HOURS: AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY, AND HOLD THE OWNER AND ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING FOR LIABILITY ARISING FROM THE NEGLIGENCE OF THE OWNER OR FUGINFER
- 5. THE CONTRACTOR SHALL NOTIFY ALL ENTITIES INVOLVED (PUBLIC AND PRIVATE) 48 HOURS PRIOR TO THE BEGINNING OF CONSTRUCTION, AND PROVIDE 48 HOURS PRIOR NOTICE FOR ALL SURVEYING AND INSPECTIONS DURING CONSTRUCTION.
- 6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL EXCAVATION AND SHORING PROCEDURES AND CONFORM TO THE LATEST O.S.H.A. REQUIREMENTS.
- 7. THE CONTRACTOR SHALL MAINTAIN AN ONGOING DUST CONTROL PROGRAM, INCLUDING WATERING OF OPEN AREAS, IN ORDER TO CONFORM WITH THE LATEST STATE AND COUNTY AIR POLLUTION REGULATIONS THE CONTRACTOR SHALL HAVE A DUST CONTROL PLAN APPROVED BY THE WASHOE COUNTY HEALTH DISTRICT, AIR POLLUTION CONTROL DIVISION PRIOR TO COMMENCEMENT OF ANY WORK.
- 8. THE CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE, PERMIT AND IMPLEMENT A STORM WATER POLLUTION PREVENTION PLAN (S.W.P.P.P.) IN CONFORMANCE WITH FEDERAL, STATE, AND LOCAL REQUIREMENTS. THE CONTRACTOR SHALL MAINTAIN EXISTING BEST MANAGEMENT PRACTICES (B.M.P.) IMPROVEMENTS THAT ARE IN PLACE, AND SHALL PROVIDE AND MAINTAIN ADDITIONAL B.M.P.S AS REQUIRED TO IMPLEMENT THE S.W.P.P.P.
- 9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DAILY REMOVAL OF ALL CONSTRUCTION MATERIALS SPILLED ON PAVED STREETS, ON—SITE AND OFF—SITE.
- 10. THE CONTRACTOR SHALL PURSUE THE WORK IN A CONTINUOUS AND DILIGENT MANNER,
 CONFORMING TO ALL PERTINENT SAFETY REGULATIONS, TO INSURE A TIMELY COMPLETION OF
 THE PROJECT
- 11. ALL EXISTING UTILITY LOCATIONS, SIZES, AND DESCRIPTIONS AS SHOWN ON THESE DRAWINGS ARE FROM SURFACE OBSERVATIONS USED IN CONNECTION WITH AVAILABLE RECORDS, REFERENCE MAPS, DRAWINGS AND VERBAL STATEMENTS SUPPLIED BY UTILITY COMPANIES, AND MAYBE WHOLLY ACCURATE OR REALIZABLE. THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES WHICH MAY BE AFFECTED BY THE WORK TO OBTAIN ASSISTANCE IN LOCATING EXISTING MAINS AND SERVICE CONNECTIONS. THE CONTRACTOR SHALL ALSO CALL U.S.A. (811) PRIOR TO BEGINNING WORK.
- 12. IT IS THE CONTRACTORS RESPONSIBILITY TO VERIFY ALL EXISTING GRADES PRIOR TO CONSTRUCTION. IF ANY DISCREPANCY OCCURS CONTACT THE ENGINEER IMMEDIATELY.
- 13. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONSTRUCTION SIGNING, BARRICADES AND TRAFFIC DELINEATION TO CONFORM TO THE STATE OF NEVADA, DEPARTMENT OF TRANSPORTATION "NEVADA WORK ZONE TRAFFIC CONTROL MANUAL" AND CITY OF SPARKS STANDARDS
- 14. THE CONTRACTOR SHALL, AT ALL TIMES DURING CONSTRUCTION PROTECT FROM DAMAGE EXISTING IMPROVEMENTS ON AND AROUND THE SITE, INCLUDING, BUT NOT LIMITED TO, PAVEMENT, CURB AND GUTTER, SIDEWALKS, LANDSCAPING, SIGNAGE, STORM, AND SANITARY SEWER, AND ALL UTILITIES, THE CONTRACTOR SHALL ASSUME SOLE RESPONSIBILITY FOR THE REPAIR OF ANY IMPROVEMENTS (EXISTING OR PROPOSED) DAMAGED THROUGHOUT THE COURSE OF CONSTRUCTION.
- 15. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN AT ALL TIMES EMERGENCY ACCESS TO THE PROJECT SITE TO THE SATISFACTION OF THE CITY OF SPARKS FIRE DEPARTMENT.
- 16. THE CONTRACTOR SHALL UPON COMPLETION OF THE PROJECT, PREPARE AND SUBMIT TO THE OWNER RECORD DRAWINGS INDICATING BY DIMENSION AND DESCRIPTION ANY FACILITY CONSTRUCTED CONTRARY TO THAT SHOWN ON THESE PLANS.
- 17. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OF ALL MATERIALS TO BE USED ON THE SITE TO INCLUDE, BUT NOT BE LIMITED TO A.C. AND P.C.C. MIX DESIGN, AGGREGATE BASE QUALIFICATIONS, PRECAST CONCRETE, CAST IRON GRATE AND COVERS, AND PIPING TO THE PROJECT ENGINEER FOR APPROVAL PRIOR TO THE MANUFACTURE OR USE OF SUCH ITEMS.
- 18. INSEPCTION REQUIREMENTS SHALL BE IN ACCORDANCE WITH CITY OF SPARKS STANDARDS OR THE ORANGE BOOK, WHICH EVER IS THE MORE STRINGENT.
- 19. SHOULD AN OBVIOUS PROBLEM BE OBSERVED, THE ENGINEER OF RECORD SHALL BE INFORMED IMMEDIATELY, AND THE ENGINEER OF RECORD SHALL REQUIRE CORRECTIVE ACTION.

UTILITY NOTES:

- 1. ALL SANITARY SEWER LATERALS SHALL BE 4" PVC (SDR-35) AND SHALL HAVE A MINIMUM GRADE OF 2.00%.
- 2. ALL WATER AND SEWER LINES SHALL HAVE A MINIMUM OF A 10' HORIZONTAL SEPARATION OR AN 18" VERTICAL SEPARATION AT CROSSINGS. IN THE EVENT THAT THE WATER MAIN IS TO CROSS BELOW OR WITHIN 18" OF THE SANITARY SEWER MAIN, THE CONTRACTOR SHALL FOLLOW THE STANDARDS SET FORTH BY TMWA.
- 3. ALL STREET AND COURTS SHOWN HEREON ARE PUBLIC AND MAINTAINED BY THE CITY OF SPARKS.
- 4. ALL MANHOLES ARE TYPE 1-48" OR AS SHOWN ON THE PLANS. ALL CATCH BASINS ARE TYPE 4-R OR AS SHOWN ON THE PLANS.
- 5. PVC SEWER PIPE SHALL BE CLASS SDR—35 UNLESS OTHERWISE NOTED AND CONFORM TO ASTM D3034. INSTALLATION SHALL BE IN ACCORDANCE WITH UNIBELL PLASTIC PIPE ASSOCIATION STANDARD AND RECOMMENDED PRACTICES.
- 6. ALL REINFORCED CONCRETE PIPE SHALL BE CLASS III UNLESS OTHERWISE NOTED.
- 7. ALL EXISTING UTILITIES BEING TIED INTO SHALL BE EXPOSED TO CHECK FOR GRADE CONFORMANCE TO THOSE SHOWN ON THE PLANS. IF A DISCREPANCY OCCURS, CONTACT THE ENGINEER IMMEDIATELY BEFORE PROCEEDING.
- 8. THE CONTRACTOR SHALL HAVE EXISTING UTILITIES LOCATED BY CALLING "USA" TOLL FREE AT (1-800-227-2600).
- 9. GAS AND ELECTRIC SHOWN HEREON ARE SCHEMATIC ONLY. DESIGN SHALL BE BY NV
- 10. THE GAS AND WATER SHALL BE OWNED AND MAINTAINED BY NV ENERGY AND TMWA.

 CONSTRUCTION OF THE WATER SYSTEM SHALL BE COORDINATED WITH TMWA.
- 11. ALL SANITARY SEWER MAINS ARE TO BE MAINTAINED BY THE CITY OF SPARKS.
- 12. THE CONTRACTOR SHALL PERFORM AN AIR PRESSURE TEST FOR THE SANITARY SEWER MAINS PER THE CITY OF SPARKS REQUIREMENTS. THE TEST SHALL BE PERFORMED IN THE PRESENCE OF THE CITY ENGINEER.
- 13. ALL PVC SANITARY SEWER PIPE SHALL BE BALLED MANDREL TESTED PER CITY OF SPARKS REQUIREMENTS.
- 14. ALL STORM DRAINAGE FACILITIES LOCATED WITHIN THE PUBLIC RIGHT—OF—WAY ARE TO BE MAINTAINED BY THE CITY OF SPARKS.
- 15. REFER TO THE APPROPRIATE STREET IMPROVEMENT SHEET FOR INVERT ELEVATIONS OF ALL SEWER AND STORM DRAIN FACILITIES.
- 16. SEE PROFILE PLANS FOR VERTICAL AND HORIZONTAL DATA.
- 17. ALL PVC WATER PIPE SHALL BE PRESSURE TESTED IN ACCORDANCE WITH TMWA CONSTRUCTION STANDARDS.
- 18. ALL STORM DRAIN LATERALS 15" AND SMALLER SHALL CONNECT TO THE MAIN LINE USING AN INSERT TEE, TEE FITTING OR AT A MANHOLE. CUTTING PIPE, INSERTING LATERAL, AND SEALING WITH CONCRETE SHALL NOT BE ALLOWED.
- 19. ALL EXISTING UNDER GROUND SANITARY SEWER AND STORM DRAIN FACILITIES TO BE ABANDONED IN PLACE SHALL BE GROUT FILLED.

PROJECT ASBESTOS CEMENT PIPE (ACP) REMOVAL, HANDLING AND DISPOSAL REQUIREMENTS:

1. IF ASBESTOS CEMENT PIPE (ACP) (AKA TRANSITE), AND/OR PIPE WITH COATINGS CONTAINING ASBESTOS ARE TO BE RETIRED THEY SHALL BE LEGALLY REMOVED, STORED, TRANSPORTED AND DISPOSED OF PER APPLICABLE OSHA, WASHOE COUNTY AND THESE REQUIREMENTS.

2. ONLY EMPLOYEES TRAINED AND CURRENTLY CERTIFIED IN THE HANDLING AND DISPOSAL OF ASBESTOS CONTAINING MATERIALS SHALL CONDUCT ANY WORK RELATED TO THE REMOVAL, STORAGE AND DISPOSAL OF ASBESTOS MATERIAL

- 2.1 THE CONTRACTOR SHALL BE REQUIRED TO PROVIDE CURRENT ASBESTOS ABATEMENT CERTIFICATES SUBMITTALS FOR EACH EMPLOYEE THAT WILL CONDUCT WORK ON PIPE CONTAINING
- ASBESTOS MATERIALS.

 2.2 ANY WORK ON THE REMOVAL OF PIPE CONTAINING ASBESTOS BY UNAUTHORIZED EMPLOYEES NOT CURRENTLY CERTIFIED SHALL RESULT IN AN IMMEDIATE STOP WORK ORDER WITH NO ADDITIONAL COST TO TMWA FOR STANDBY TIME, ADDED DELAYS, BACKFILLING/RE-EXCAVATION, STEEL PLATES AND/OR ANY WORK NEEDED TO SECURE THE SITE UNTIL PROPERLY TRAINED PERSONNEL CAN COMPLETE THE WORK.

3. <u>ASBESTOS ABATEMENT, HANDLING, STORAGE AND DISPOSAL PLAN</u> (<u>AAHSD</u>): THE CONTRACTOR SHALL BE REQUIRED TO PROVIDE A AAHSD SUBMITTAL THAT A MINIMUM SHALL CONTAIN THE FOLLOWING:

- 3.1. LIST OF ALL EMPLOYEES THAT ARE TRAINED AND CURRENTLY
 CERTIFIED IN ASBESTOS ABATEMENT, HANDLING AND DISPOSAL.
- 3.2. METHOD(S) TO CUT AND REMOVE PIPE MATERIALS CONTAINING ASBESTOS.
- 3.3. METHODS TO PROTECT EMPLOYEES AND/OR PUBLIC FROM EXPOSURE.
 3.4. METHODS TO STORE ON—SITE IF NOT GOING DIRECTLY TO LANDFILL.
 3.5. WASTE MANIFEST THAT DOCUMENTS LOCATION REMOVED, QUANTITIES,
 WHERE/WHEN STORED, WHEN DISPOSED AT LANDFILL AND LANDFILL
- DISPOSAL TICKET.

 3.5.a A "ASBESTOS CEMENT PIPE (AKA TRANSITE) AND/OR PIPE WITH COATINGS CONTAINING ASBESTOS LOG" WILL BE PROVIDED THAT WILL NEED TO BE COMPLETED BY CONTRACTOR FOR EACH LOCATION PIPE CONTAINING ASBESTOS IS REMOVED. THIS LOG DOCUMENTS REMOVAL AND ON—SITE STORAGE IF NOT TAKEN DIRECTLY TO LANDFILL AND IS ADDITION TOTHE WASTE MANIFEST THAT DOCUMENTS FINAL DISPOSAL IN AN APPROVED LANDFILL. THIS FORM MUST BE COMPLETED/SIGNED BY THE CONTRACTOR'S DESIGNATED ASBESTOS TRAINED/CERTIFIED PERSONNEL. (PLEASE REFERENCE THE LOG SHEET BELOW)

ASBESTOS CEMENT PIPE (AKA TRANSITE) AND/OR PIPE WITH COATINGS CONTAIN ASBESTOS LOG DATE OF REMOVAL: LOCATION OF REMOVAL: PIPE DIAMETER AND LENGTH: BROKEN PIECES APPROXIMATE VOLUME (CUBIC FEET): MISC INFORMATION: PIPE BAGGED/WRAPPED: PIPE STORED PRIOR TO LANDFILL (SPECIFY LOCATION BELOW): YES______ ON_____ DATE_____ ON-SITE DISPOSAL LOCATION PRIOR TO LANDFILL: PRINT ASBESTOS TRAINED/CERTIFIED EMPLOYEE (NAME/NUMBER): EMPLOYEE SIGNATURE (ASBESTOS TRAINED/CERTIFIED) DATE

GENERAL LEGEND:

(E)

<u> III III SAWCUT LINE</u>

EXISTING

GRADE BREAK

SLOPE IN PERCENT

ELEVATION @ FINISH GRADE

ELEVATION @ TOP OF CURB

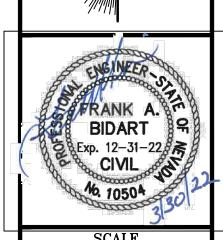
ELEVATION @ GRADE BREAK

ELEVATION @ FLOW LINE

EXISTING SPOT ELEVATION

	EXISTING ASPHALT PAVING		CURB AND GUTTER (REFERENCE PLAN FOR TYPE)
	EXISTING PORTLAND CEMENT CONCRETE		POST CURB (REFERENCE PLAN FOR TYPE)
	EXISTING FORTEAND CEMENT CONCRETE		MANHOLE
=====	EXISTING CURB AND GUTTER		TYPE 4-R CATCH BASIN
=====	EXISTING POST CURB		TYPE 1 CATCH BASIN
(Ô)	EXISTING MANHOLE	Ø	TYPE 3 CATCH BASIN
	EXISTING TYPE 4-R CATCH BASIN	SD - [12">	STORM DRAIN
	EXISTING TYPE 1 CATCH BASIN	——SS- <u>8"</u> >—	SANITARY SEWER
SD-12">	EXISTING STORM DRAIN	1	
SS- <u>8"</u>	EXISTING SANITARY SEWER	SS <u>8"</u>	SANITARY SEWER LATERAL
SS- <u>8</u> ">-	EXISTING SANITARY SEWER LATERAL	——10"W/4"G——	WATER AND GAS
— —10"W/4"G— —	EXISTING WATER AND GAS	10*W	WA TER
— — —10 " W— — —	EXISTING WATER	4"G	GAS
		ELECT/TEL	UNDERGROUND ELECTRIC/ TELEPHONE
	EXISTING GAS	ELECT	UNDERGROUND ELECTRIC
— — ELECT/TEL — —	EXISTING UNDERGROUND ELECTRIC/ TELEPHONE		UNDERGROUND TELEPHONE
- — -ELECT- — -	EXISTING UNDERGROUND ELECTRIC	TEL	UNDERGROUND TELETHORE
TEL	EXISTING UNDERGROUND TELEPHONE	A F.H.	FIRE HYDRANT
← F.H.	EXISTING FIRE HYDRANT		WATER SERVICE
,		4396	EXISTING CONTOUR
	EXISTING WATER SERVICE	4396	PROPOSED CONTOUR
- 	EXISTING SITE LIGHT	(E)	EXISTING
<i>─ / ─4396- / ⁻</i>	EXISTING CONTOUR		

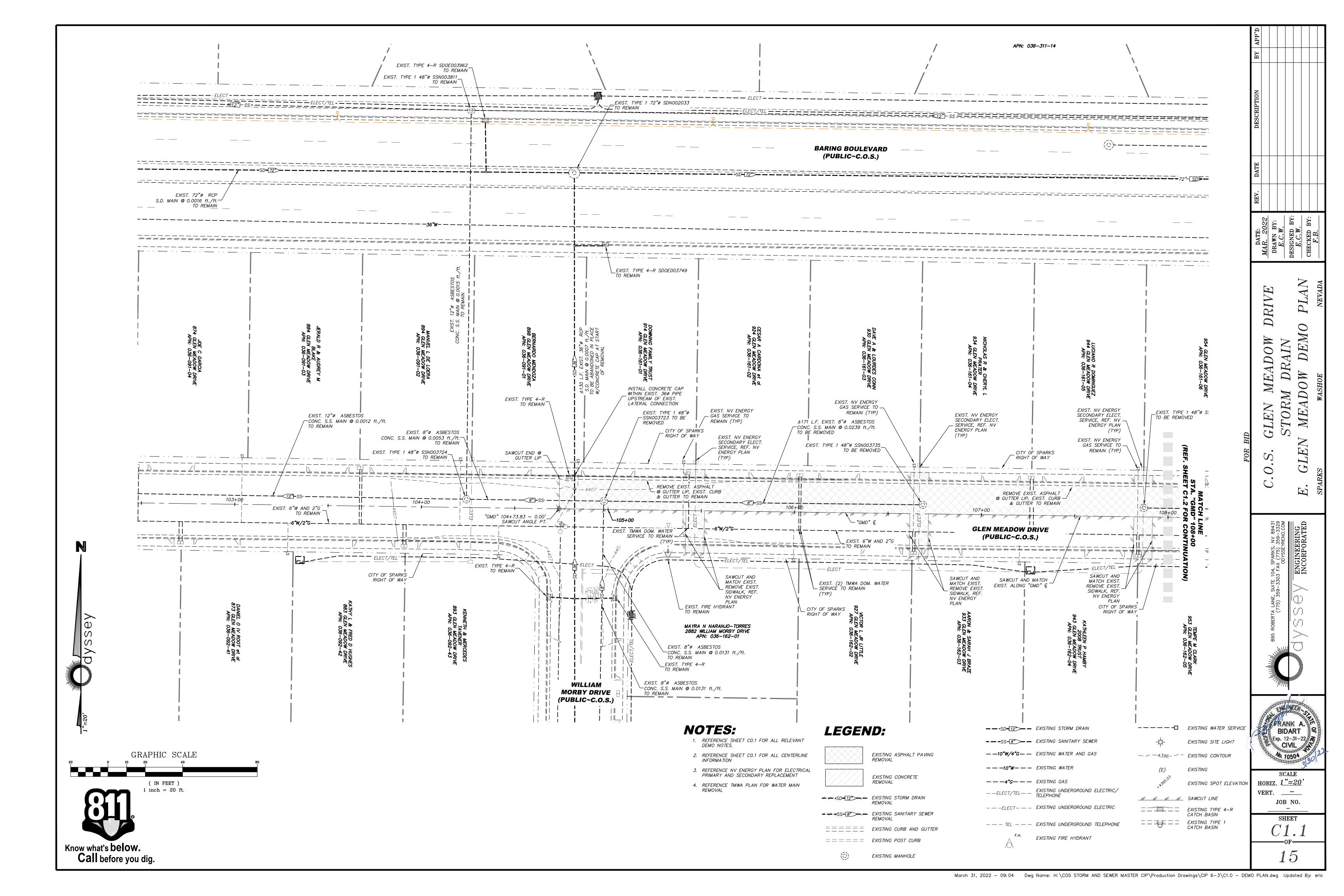
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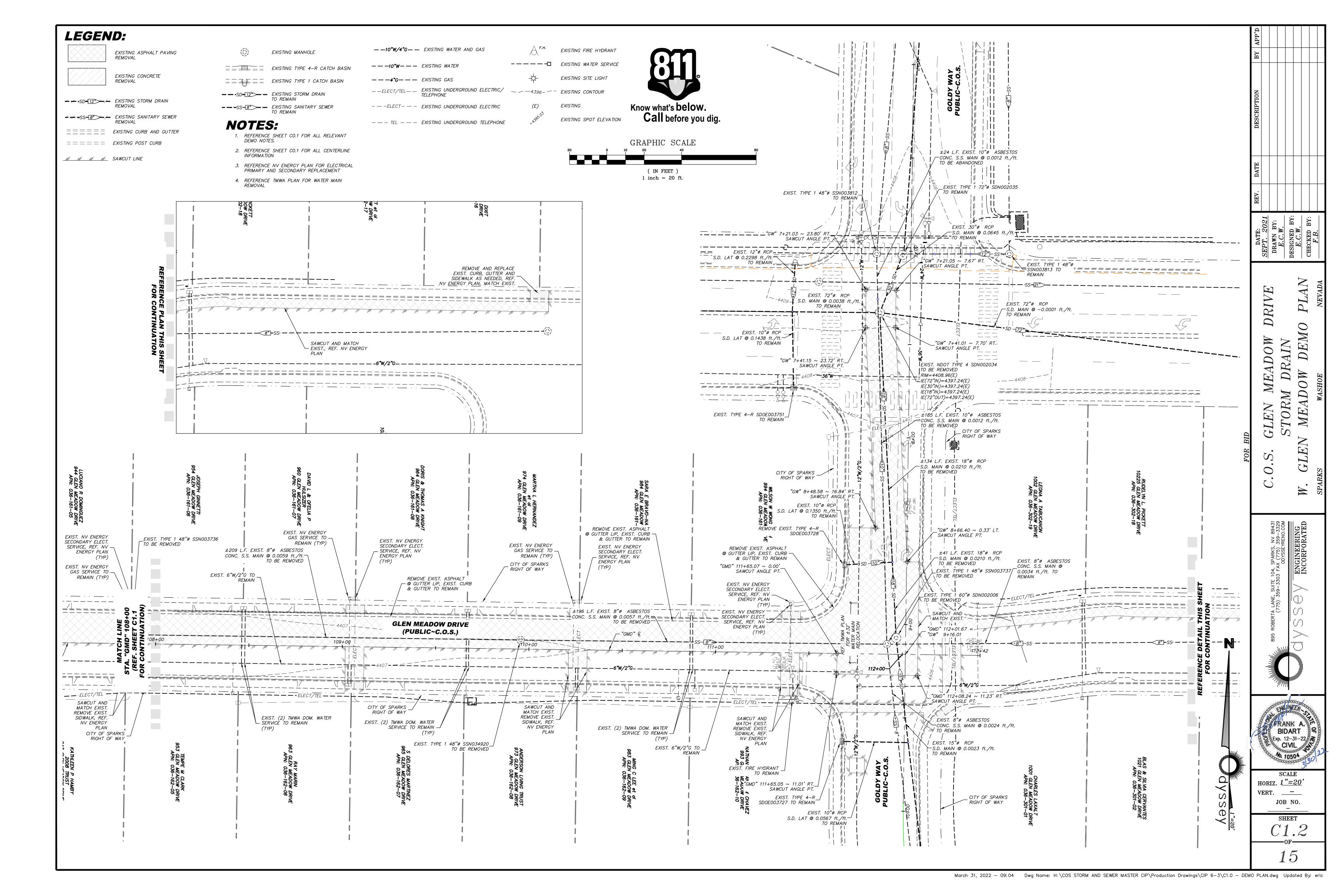


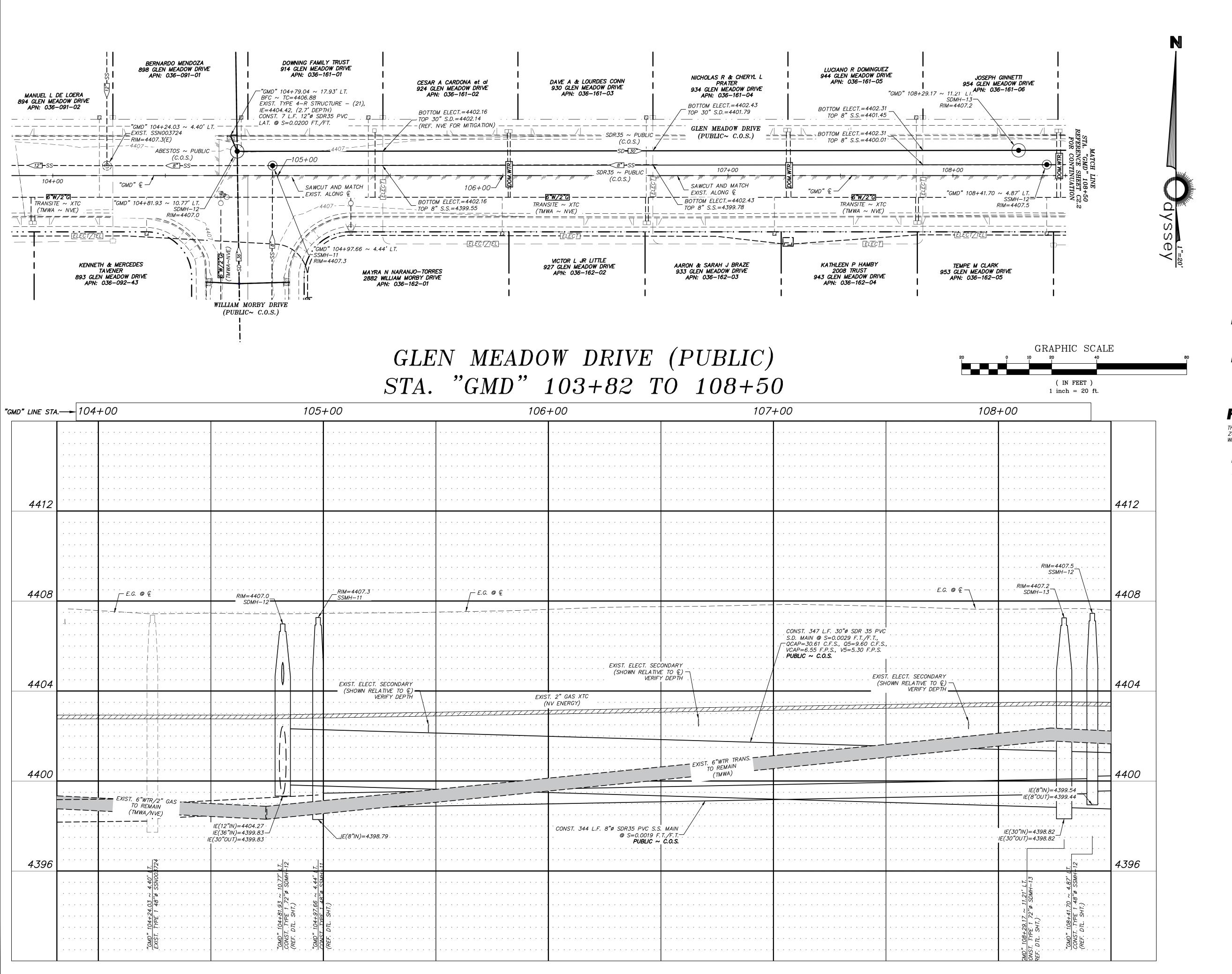
SCALE
HORIZ. __
VERT. __
JOB NO.

SHEET
CO.
Call before you dig.

15









LEGENI	J:
	CURB AND GUTTER (DASHED IF EXISTING)
	POST CURB (DASHED IF EXISTING)
	MANHOLE (DASHED IF EXISTING)
	TYPE 4-R CATCH BASIN (DASHED IF EXISTING)
- \$-	SITE LIGHT
SD- <u>12</u> ">	STORM DRAIN (DASHED IF EXISTING)
SS- <u>8"</u>	SANITARY SEWER (DASHED IF EXISTING)
SS- <u>8</u> ">	SANITARY SEWER LATERAL (DASHED IF EXISTING)
——10"W/4"G——	WATER AND GAS (DASHED IF EXISTING)
10*W	WATER (DASHED IF EXISTING)
4"G	GAS (DASHED IF EXISTING)
	WATER SERVICE (DASHED IF EXISTING)
Å ^{F.H.}	FIRE HYDRANT
ELECT/TEL	UNDERGROUND ELECTRIC/ TELEPHONE (DASHED IF EXISTING)
ELECT	UNDERGROUND ELECTRIC (DASHED IF EXISTING)
——— TEL ———	UNDERGROUND TELEPHONE (DASHED IF EXISTING)

BASIS OF BEARING

BASED ON THE NEVADA WEST COORDINATE SYSTEM OF 1983 (NAD 83) WITH A GRID TO GROUND FACTOR OF 1.000197939 APPLIED.

BASIS OF ELEVATION

BASED ON NORTH AMERICAN VERTICAL DATUM OF 1988, (NAVD 88) USING THE CITY OF SPARKS GEODETIC CONTROL NETWORK "BM 106" WITH A PUBLISHED ELEVATION OF 4689.50 AS RECORDED IN RECORD O SURVEY 3885, FILE NO. 3602264 OF THE WASHOE COUNTY OFFICIAL

FLOOD ZONE

THE PROPOSED PROJECT IS LOCATED WITHIN A FEMA UNSHADED ZONE X PER FIRM MAP PANELS 32031C3054G AND 32031C3060G WITH AN EFFECTIVE DATE OF MARCH 16, 2009.

NOTES:

REFERENCE SHEET CO.1 FOR NOTES

895 ROBERTA LANE, SUITE 104, SPARKS, NV 89431
(775) 359-3303 FAX (775) 359-3329
ODYSSEYRENO.COM

BY

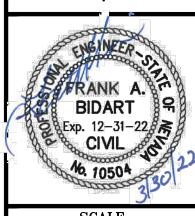
BY

SPARK

SPARK

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GLEN



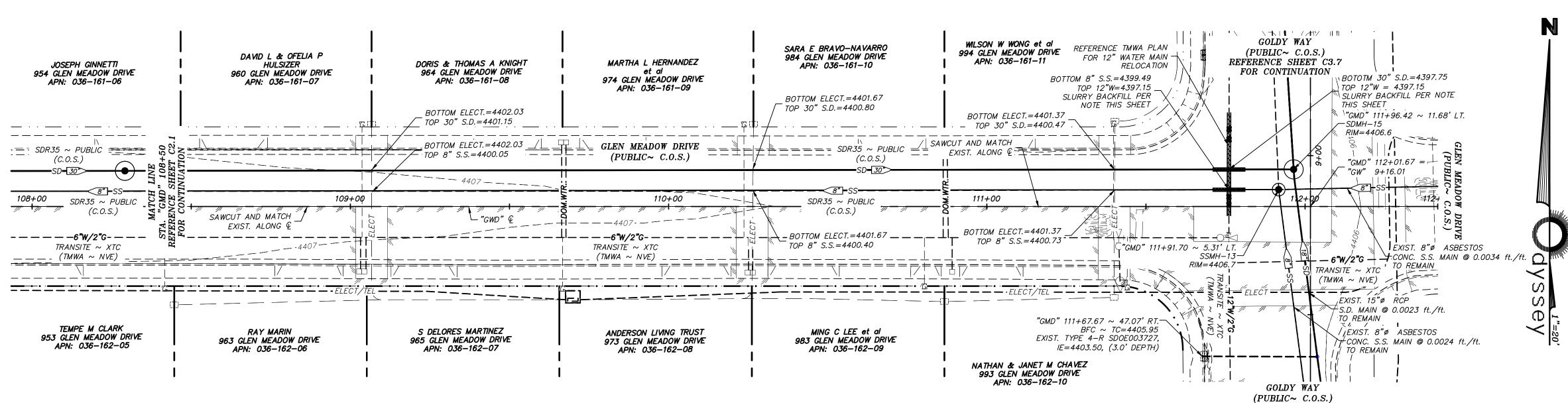
SCALE
HORIZ. 1"=20'
VERT. 1"=2'
JOB NO.

SHEET
C2. 1

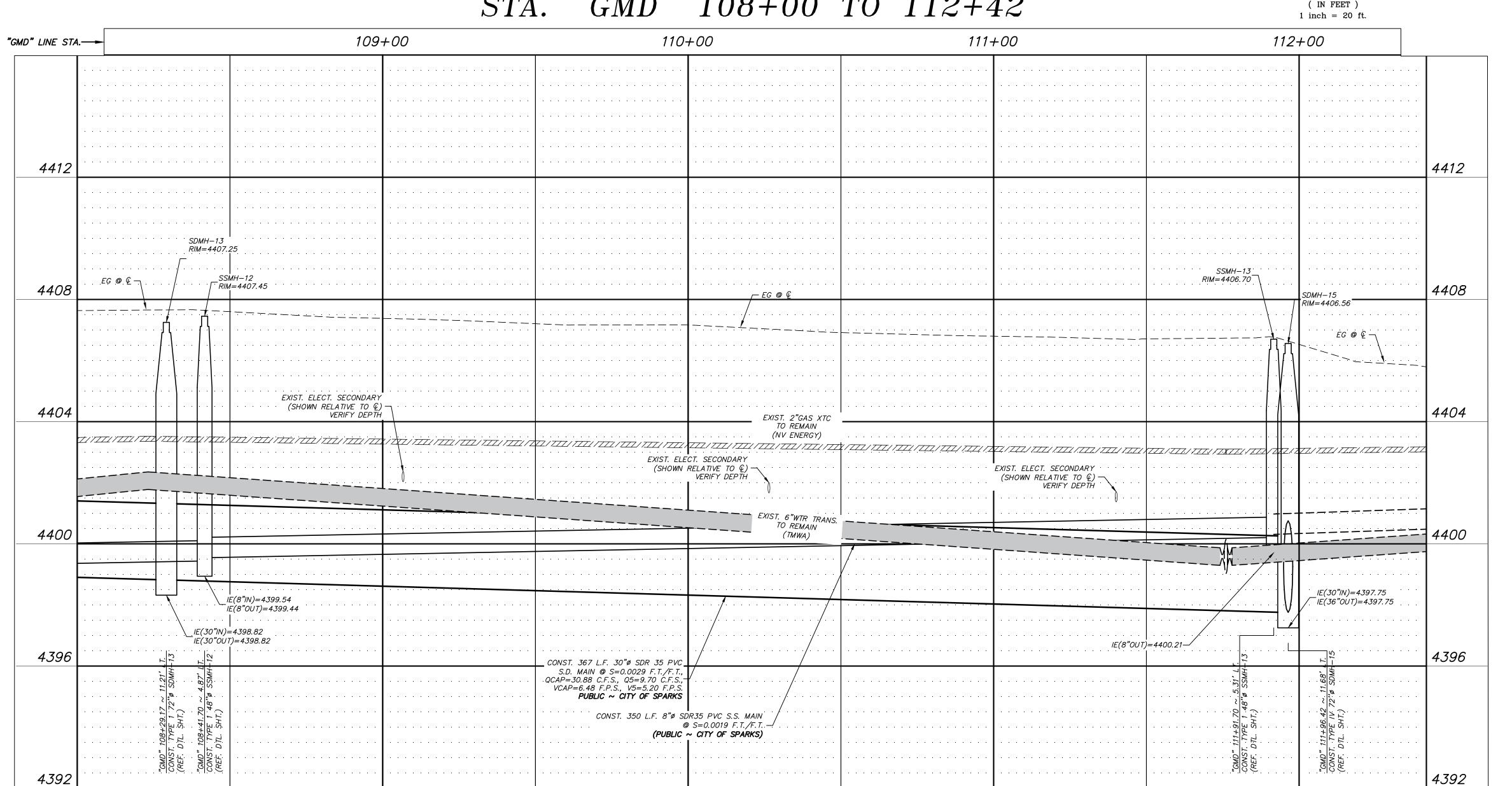
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Know what's below.

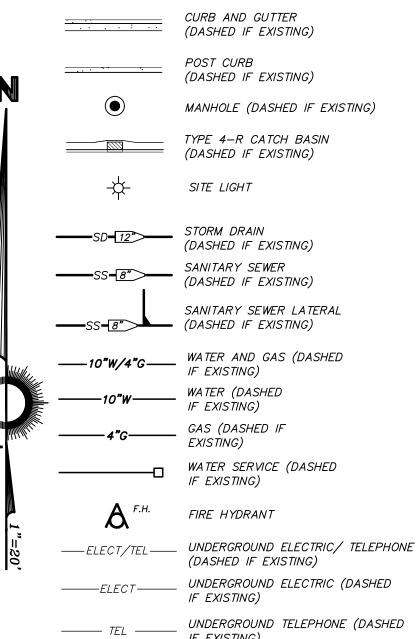
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GLEN MEADOW DRIVE (PUBLIC) STA. "GMD" 108+00 TO 112+42



LEGEND:



BASIS OF BEARING

BASED ON THE NEVADA WEST COORDINATE SYSTEM OF 1983 (NAD 83) WITH A GRID TO GROUND FACTOR OF 1.000197939 APPLIED.

BASIS OF ELEVATION

BASED ON NORTH AMERICAN VERTICAL DATUM OF 1988, (NAVD 88)
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THE PROPOSED PROJECT IS LOCATED WITHIN A FEMA UNSHADED ZONE X PER FIRM MAP PANELS 32031C3054G AND 32031C3060G WITH AN EFFECTIVE DATE OF MARCH 16, 2009.

NOTES:

GRAPHIC SCALE

REFERENCE SHEET CO.1 FOR NOTES

SLURRY BACKFILL NOTE:

CONTRACTOR SHALL INSTALL EXCAVATABLE SLURRY BACKFILL
EXTENDING 10' UP AND DOWN STREAM OF PROPOSED
WATER MAIN CROSSING. EXCABATABLE SLURRY SHALL BE INSTALLED
WITHIN THE UPPER PIPE ZONE OF 12" WATER MAIN TO SPRING LINE
OF THE PROPOSED STORM DRAIN AND SANITARY SEWER

895 ROBERTA LANE, SUITE 104, SPARKS, NV 89431
(775) 359–3303 FAX (775) 359–3329
ODYSSEYRENO.COM

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INCORPORATED

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EXP. 12-31-22 R CIVIL

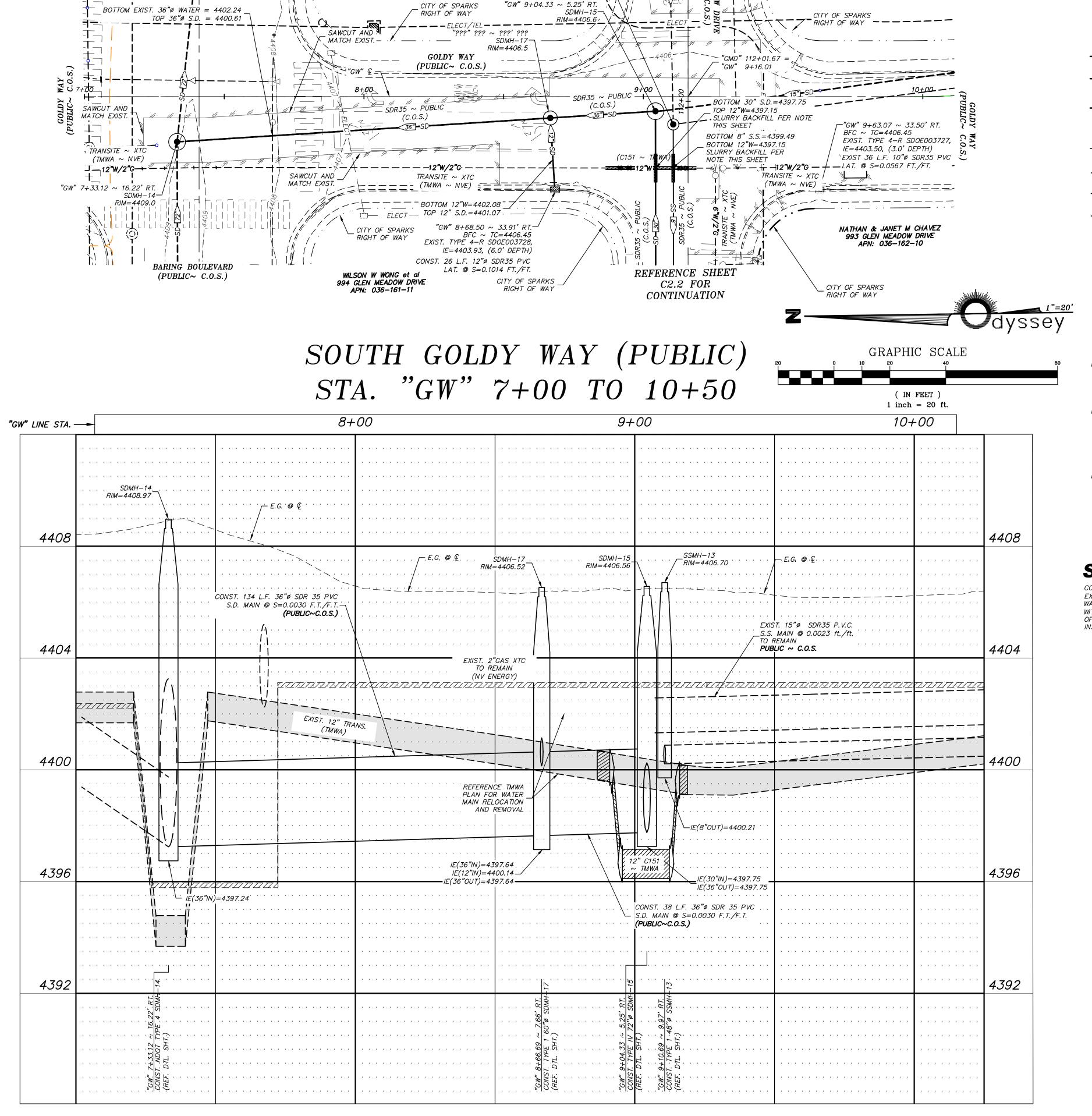
HORIZ. 1"=20'
VERT. 1"=2'
JOB NO.

-SHEET

SHEET
C2.2
—of—

March 31, 2022 − 09:05 Dwg Name: H:\COS STORM AND SEWER MASTER CIP\Production Drawings\CIP 6−3\C2.2 − EAST GLEN MEADOW DRIVE PLAN & PROFILE.dwg Updated By: eric

Know what's below.
Call before you dig.



"GW" 9+10.69 ~ 9.97' RT.

SSMH-13+ RIM=4406.7 |

LEONA A TABUCANON 1002 GLEN MEADOW DRIVE APN: 036-302-19

LEGEND:

CHARLES LAXALT 1001 GLEN MEADOW DRIVE

	CURB AND GUTTER (DASHED IF EXISTING)
<u></u>	POST CURB (DASHED IF EXISTING)
lacktriangle	MANHOLE (DASHED IF EXISTING)
	TYPE 4—R CATCH BASIN (DASHED IF EXISTING)
SD=12*>	STORM DRAIN (DASHED IF EXISTING)
——SS- <u>8"</u>	SANITARY SEWER (DASHED IF EXISTING)
SS- <u>_8"</u>	SANITARY SEWER LATERAL (DASHED IF EXISTING)
10"W/4"G	WATER AND GAS (DASHED IF EXISTING)
10 " W	WATER (DASHED IF EXISTING)
4*G	GAS (DASHED IF EXISTING)
6"RW	RECLAIM IRRIGATION MAIN (DASHED IF EXISTING)
	WATER SERVICE (DASHED IF EXISTING)
Å ^{F.H.}	FIRE HYDRANT
ELECT/TEL	UNDERGROUND ELECTRIC/ TELEPHONE (DASHED IF EXISTING)
ELECT	UNDERGROUND ELECTRIC (DASHED IF EXISTING)
——— TEL ———	UNDERGROUND TELEPHONE (DASHED IF EXISTING)
- \$-	SITE LIGHT

BASIS OF BEARING

BASED ON THE NEVADA WEST COORDINATE SYSTEM OF 1983 (NAD 83) WITH A GRID TO GROUND FACTOR OF 1.000197939 APPLIED.

BASIS OF ELEVATION

BASED ON NORTH AMERICAN VERTICAL DATUM OF 1988, (NAVD 88)
USING THE CITY OF SPARKS GEODETIC CONTROL NETWORK "BM 106"
WITH A PUBLISHED ELEVATION OF 4689.50 AS RECORDED IN RECORD OF
SURVEY 3885, FILE NO. 3602264 OF THE WASHOE COUNTY OFFICIAL
RECORDS.

FLOOD ZONE

THE PROPOSED PROJECT IS LOCATED WITHIN A FEMA UNSHADED ZONE X PER FIRM MAP PANELS 32031C3054G AND 32031C3060G WITH AN EFFECTIVE DATE OF MARCH 16, 2009.

NOTES:

REFERENCE SHEET CO.1 FOR NOTES

SLURRY BACKFILL NOTE:

CONTRACTOR SHALL INSTALL EXCAVATABLE SLURRY BACKFILL EXTENDING 10' UP AND DOWN STREAM OF PROPOSED WATER MAIN CROSSING. EXCABATABLE SLURRY SHALL BE INSTALLED WITHIN THE UPPER PIPE ZONE OF 12" WATER MAIN TO SPRING LINE OF THE PROPOSED STORM DRAIN AND SANITARY SEWER INSTALLATIONS

895 ROBERTA LANE, SUITE 104, SPARKS, N (775) 359–3303 FAX (775) 3 ODYSSEYR ODYSSEYR ET (775) 359–3304 FAX (775) 3 ODYSSEYR ODYSSEYR ET (775) 3 ET (775) 3 ODYSSEYR ET (775) 3 ET (775) 3 ET (775) 3 ODYSSEYR ET (775) 3 ET (

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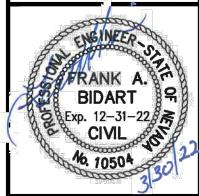
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MEADO

GLEN

DRAIN AY P

TOR



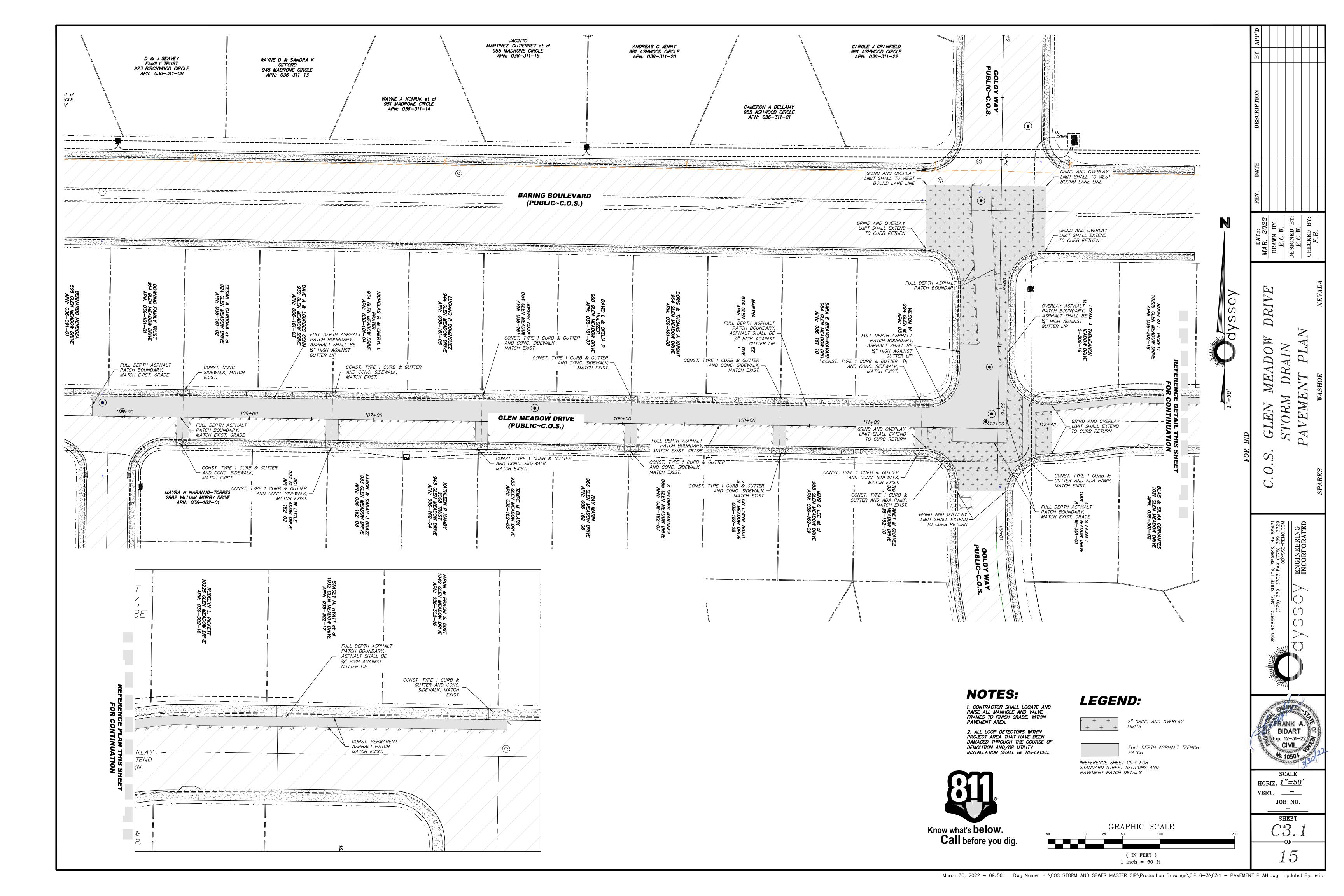
SCALE
HORIZ. 1"=20'
VERT. 1"=2'
JOB_NO.

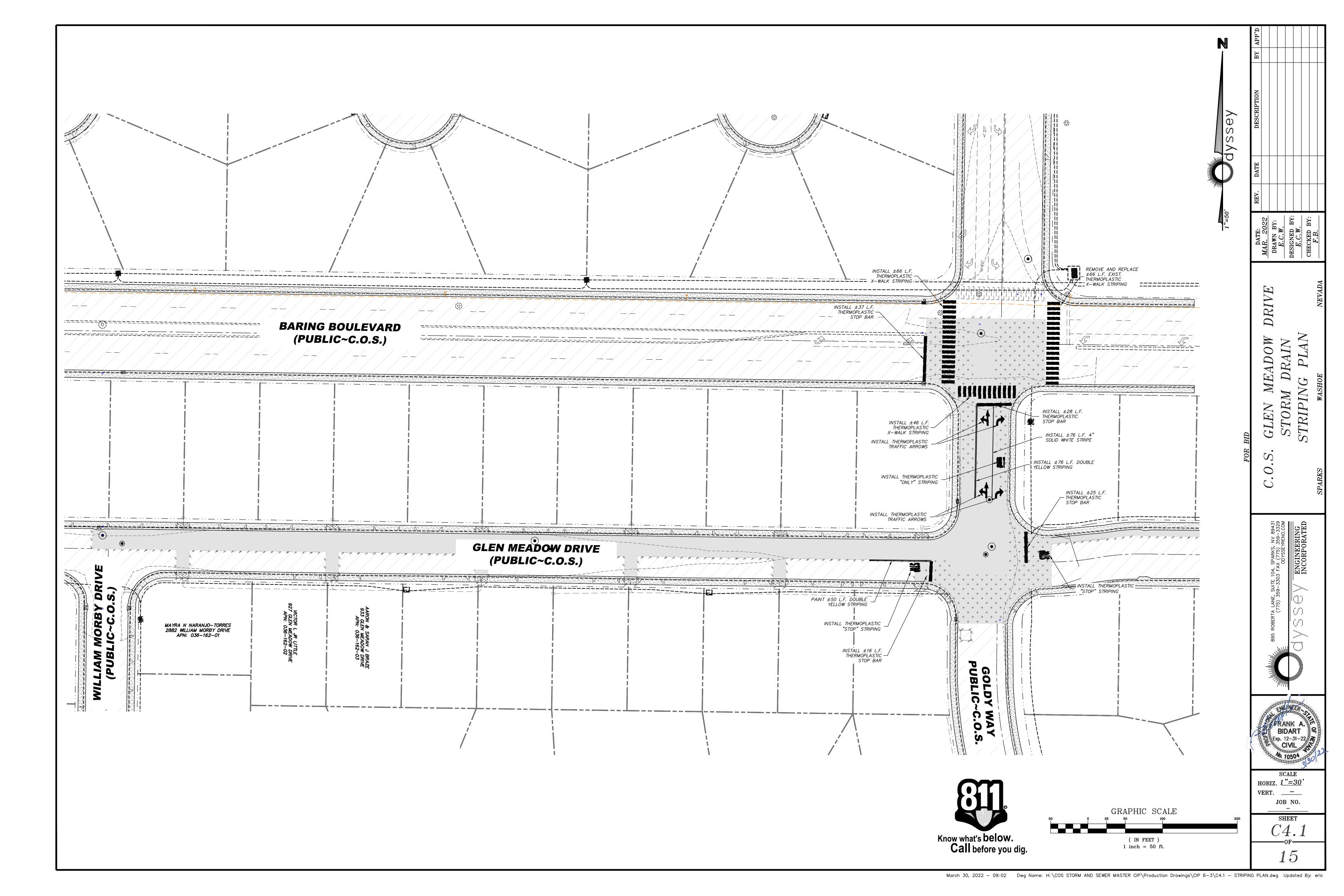
Know what's below.

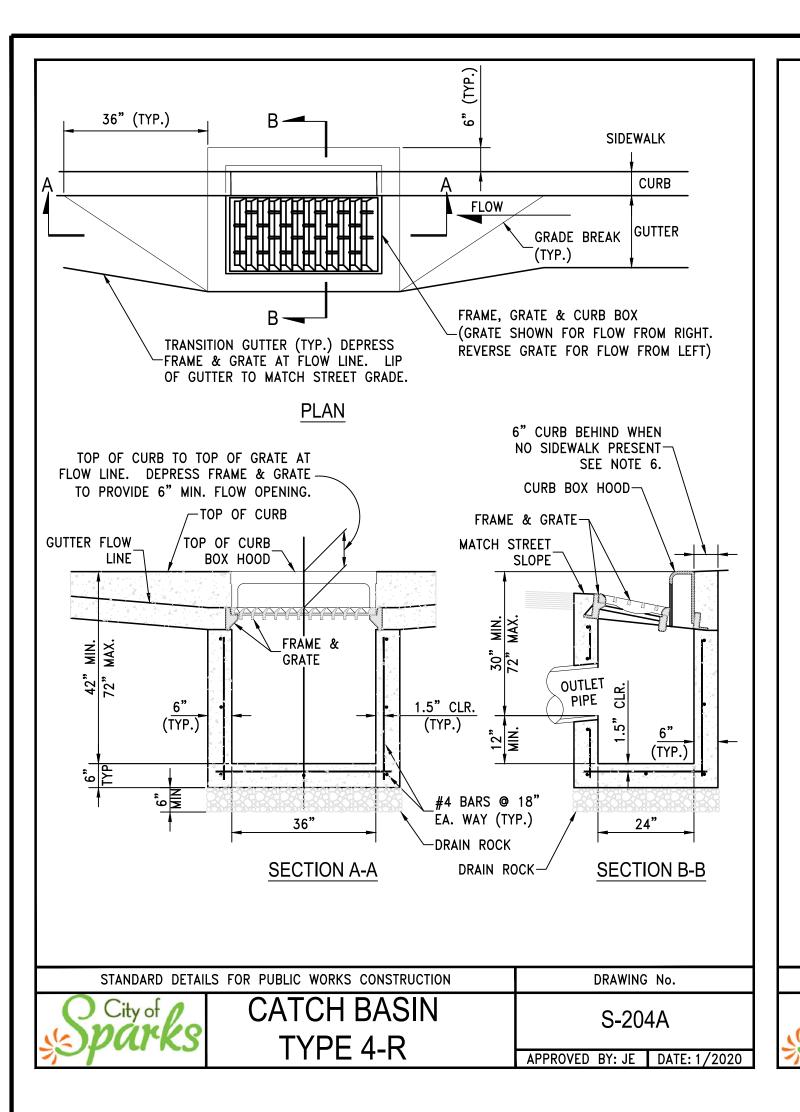
Call before you dig.

SHEET
C2.3
—of—

15







PIPE ID OR 48" MAX

·CONCENTRIC MANHOLE—

FORM CIRCULAR OF—

ELLIPTICAL MANHOLE

-SANDBAGS MAY BE

USED AS FORM

⊰EARTH IN PLACE CAN 🚣

BE USED AS FORM

MANHOLE TYPE IV

'DRAIN ROCK⁄

EARTH IN

PLACE CAN

AS FORM

BE USED

6" MIN-

SECTION A-A

(TANGENT)

STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION

4" MIN

6" MAX

SECTION B-B

(ANGLE POINT)

NO. 4 AT 4"

EACH WAY

'0" MIN

12"MAX

SANDBAGS MAY

- BE USED

AS FORM

SLOPE TO CONFORM

W/ PIPE BELOW SPRING

LINE, PROVIDE SMOOTH

FINISH

NO. 4 AT 12"

DRAWING No.

S-206C

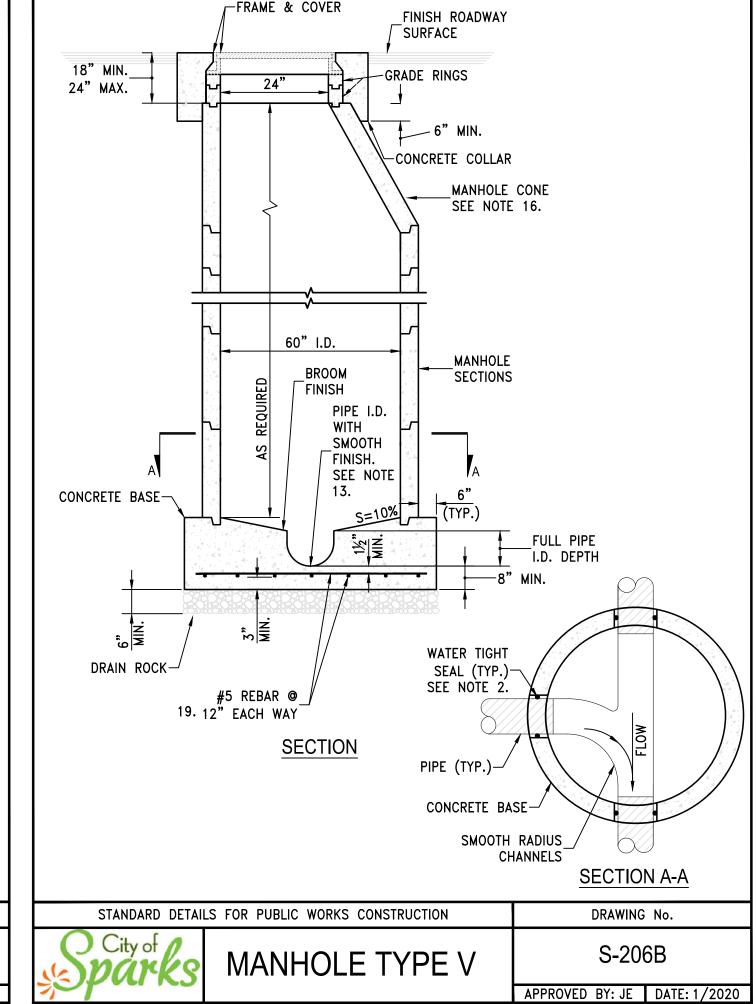
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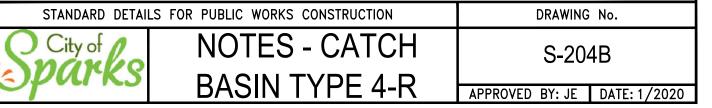
EACH WAY

NOTES:

- 1. P.C.C CURB AND GUTTER TRANSITION SHALL BE PORTLAND CEMENT CONCRETE (P.C.C.) AND 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 0.45, AIR ENTRAINMENT 6% ±1.5%, SLUMP AT 1 TO 4 INCHES. MIX DESIGN SHALL CONFORM TO THE REQUIREMENTS OF SECTION 337 OF STANDARD SPECIFICATIONS OF PUBLIC 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. POLYPROPYLENE 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.
- 2. REINFORCING STEEL SHALL BE GRADE 40 AND HAVE 1.5" MINIMUM CLEAR COVER.
- 3. CONCRETE STRUCTURE MAY BE A CAST-IN-PLACE CONCRETE UNIT UPON APPROVAL OF THE CITY ENGINEER. BASE OF CAST-IN-PLACE CONCRETE UNIT SHALL BE PLACED ON 6" COMPACTED DRAIN ROCK.
- 4. FRAME, GRATE AND CURB BOX HOOD ASSEMBLY SHALL BE D&L I-3519 WITH TYPE L "VANE GRATE" OR APPROVED EQUAL. GRATE SHALL BE INSTALLED WITH PROPER FLOW DIRECTION. EACH CATCH BASIN SHALL BE CAST WITH A FISH IMAGE AND THE WORDS "NO DUMPING! DRAINS TO RIVERS" IN THE TOP OF EACH CURB HOOD.
- 5. TILT FRAME & GRATE AS REQUIRED TO ATTAIN 6" MIN. FLOW OPENING & INSTALL DURABLE SHIMS BETWEEN THE CURB BOX & FRAME AS REQUIRED TO MATCH CURB BOX TO TOP OF CURB AND FACE OF CURB (SEE SECTION B-B).
- 6. WHEN SIDEWALK IS PRESENT CONCRETE BEHIND CURB BOX SHALL BE THICKENED TO THE FULL DEPTH OF THE CURB BOX. IF NO SIDEWALK IS PRESENT, POUR 6" CONCRETE CURB STRUCTURE BEHIND GRATE AND TIE BEAM INTO BOX.
- 7. ALL CATCH BASINS, PUBLIC OR PRIVATE, SHALL BE PROVIDED WITH A "SUR-TRAP" OIL/WATER SEPARATOR OR APPROVED EQUAL.
- 8. FRAMES AND GRATES SHALL BE MATCHED TO ACHIEVE A CLOSE TOLERANCE FIT WITH MINIMAL
- 9. CATCH BASIN SHALL NOT BE PLACED WITHIN THE RADIUS OF THE CURB UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER.

	FRAME & COVER FINISH ROAD SURFACE 18" MIN. 24" MAX.	WAY
	DRAIN ROCK SECTION SECTION PIPE (TYP.) CONCRETE BA	FULL PIPE I.D. DEPTH MIN.
\dashv		
	MANHOLE TYPE I	S-206A

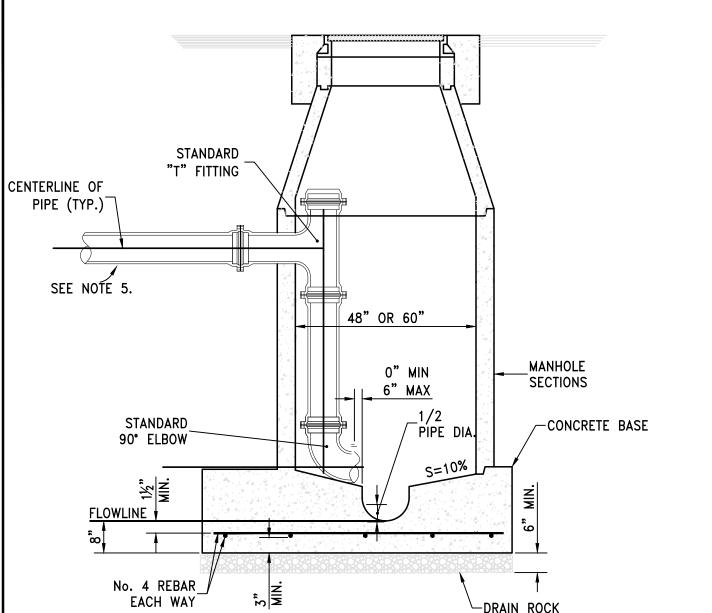




GENERAL MANHOLE NOTES

- 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 WATERTIGHT PER STANDARD DETAILS S-211A, S-211B AND S-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 PER CUBIC YARD 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 LIEU 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 V 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 SECTION 204 "MANHOLES AND CATCH BASINS" OF THE STANDARD SPECIFICATIONS.
- PRECAST MANHOLE SECTIONS, OTHER THAN GRADE RINGS, SHALL BE JOINED WITH FLEXIBLE GASKET MATERIAL SUCH AS "RAM-NEK" OR EQUAL AS PER MANUFACTURER'S RECOMMENDATIONS.
- EXCAVATION AND BACKFILL SHALL BE AS SPECIFIED FOR "TRENCH EXCAVATION AND BACKFILL" IN SECTION 305 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 EASEMENTS OR ADJACENT STRUCTURES.
- 10. MANHOLE PRECAST SECTION LENGTH SHALL BE ARRANGED TO FIT THE REQUIRED DEPTH.
- 11. NO LATERALS OR PIPES LESS THAN 8" IN DIAMETER SHALL BE CONNECTED TO THE MANHOLE.
- 12. 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.
- 14. ALL MANHOLES SHALL BE WATERTIGHT.
- 15. SEE DETAIL FOR INSIDE DROP MANHOLE FOR SANITARY SEWERS WITH MORE THAN 2 FEET VERTICAL DROP AT THE MANHOLE. THE USE OF "OUTSIDE DROP" MANHOLES IS NOT PERMITTED.
- 16. 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.
- 18. NO STEPS, LADDERS, OR OTHER CLIMBING DEVICES SHALL BE INSTALLED IN THE MANHOLE.
- 19. REINFORCING STEEL SHALL BE AS SHOWN, WIRED TIGHTLY AT ALL INTERSECTIONS AND EMBEDDED AT LEAST 1½" CLEAR, UNLESS OTHERWISE NOTED.
- 20. 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.

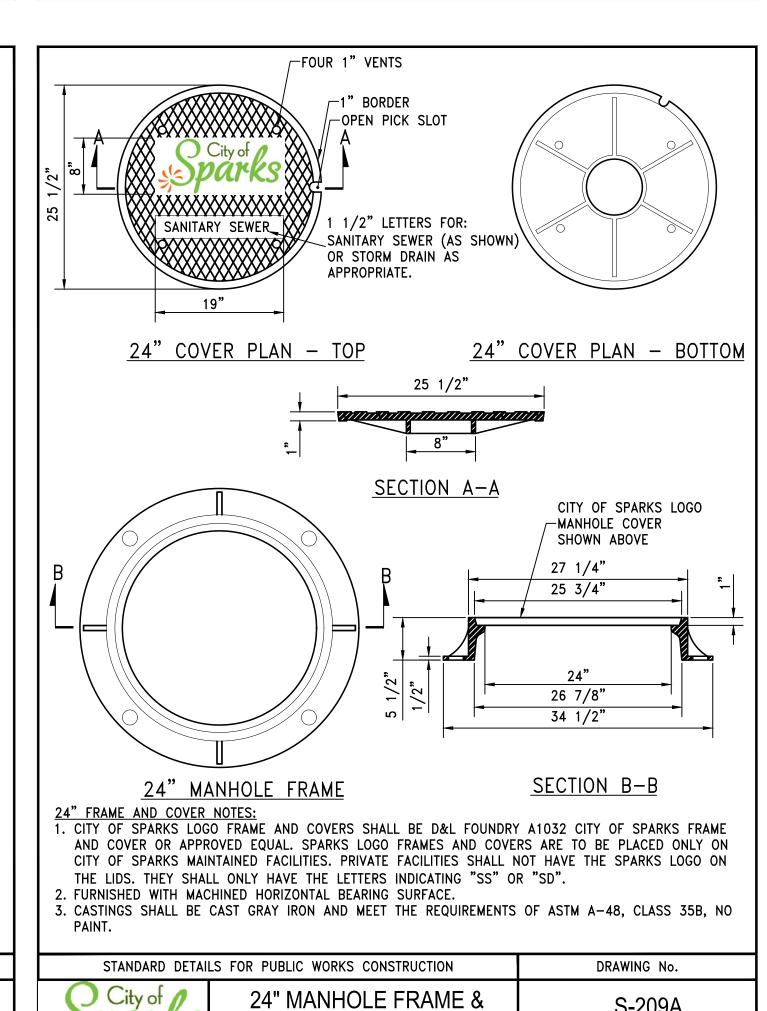
21. TYPETANUMANHBEEST	FRIPORED PARTER BROCKSEDCHRIZARA VARIONED BY CITY	ENGINEER	DRAWING	No.
City of City of	NOTES - MANHOLE TYPE I, TYPE V & TYPE IV		S-206	6D
7	,	APPROVED	BY: JE	DATE: 1/2020



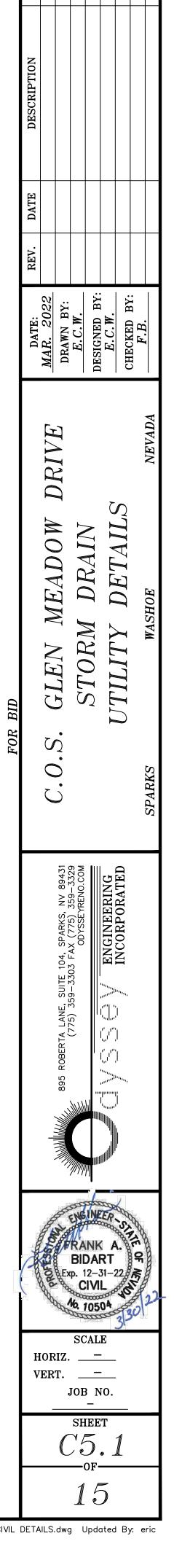
APPROVED BY: JE DATE: 1/2020

- 1. DETAIL FOR INSIDE DROP ASSEMBLY ONLY. FOR DIMENSIONS, NOTES AND DETAILS NOT SHOWN, REFER TO THE APPLICABLE STANDARD DETAIL DRAWING.
- 2. CONSTRUCTION OF AN INSIDE DROP MANHOLE MUST BE APPROVED IN WRITING BY THE CITY ENGINEER IN ADVANCE OF ANY CONSTRUCTION.
- 3. INSIDE DROP MANHOLES ARE TO BE USED ON SANITARY SEWERS WITH MORE THAN 2 FEET VERTICAL DROP AT THE MANHOLE, NOT TO EXCEED 8 FEET, UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER.
- 4. SANITARY SEWER PIPE COMPONENTS OF THE INSIDE DROP CONFIGURATION SHALL BE DUCTILE IRON PIPE WITH MECHANICAL JOINT FITTINGS PER AWWA A21.51-02.
- 5. INSTALL ONE FULL LENGTH OF DUCTILE IRON PIPE (MIN. LENGTH 20') BEYOND THE UPSTREAM END OF THE STANDARD "T" FITTING.
- 6. DUCTILE IRON MATERIAL TO BE LINED AND COATED PER AWWA A21.51-02.

STANDARD DETAIL	S FOR PUBLIC WORKS CONSTRUCTION	DRAWING	No.
S City of parks	MANHOLE-INSIDE	S-20	7
	DROP	APPROVED BY: JE	DATE: 1/2020

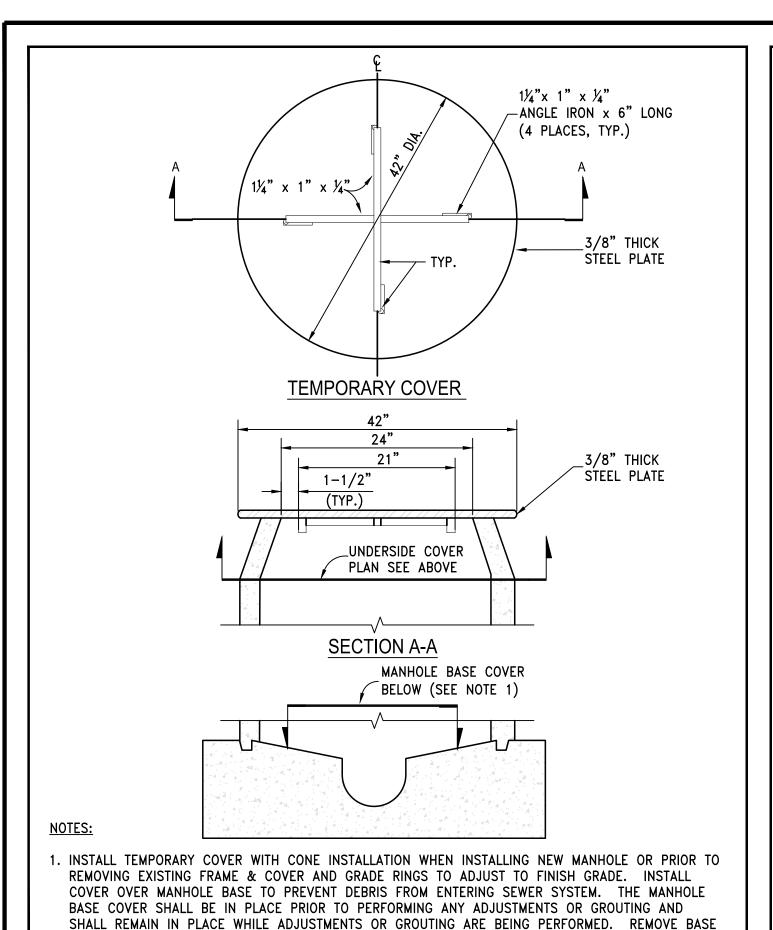


COVER



S-209A

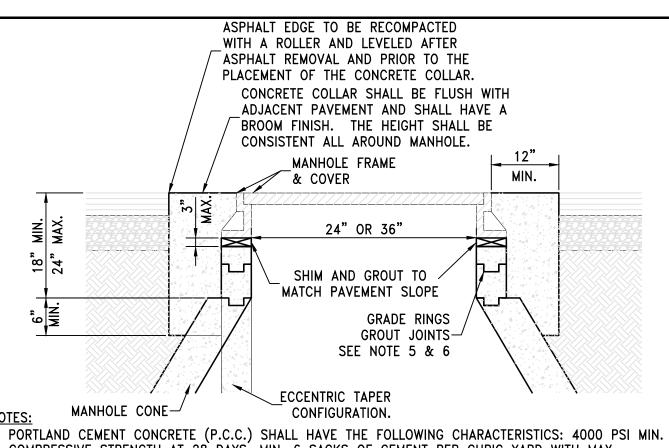
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DRAWING No.

S-209B

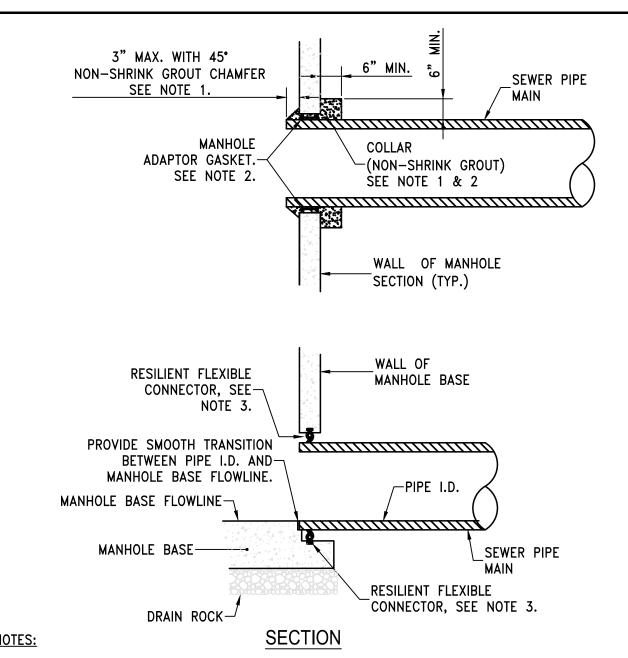
APPROVED BY: JE DATE: 1/2020



COMPRESSIVE STRENGTH AT 28 DAYS. MIN. 6 SACKS OF CEMENT PER CUBIC YARD WITH MAX. WATER-CEMENT RATIO OF 0.45, AIR ENTRAINMENT 6% ±1.5%, SLUMP AT 1 TO 4 INCHES. MIX DESIGN SHALL CONFORM TO THE REQUIREMENTS OF SECTION 337 OF STANDARD SPECIFICATIONS OF PUBLIC WORKS CONSTRUCTION (SSPWC). AS ADOPTED BY CITY COUNCIL. CEMENT SHALL BE TYPE II. ALL CEMEN' CONCRETE SHALL HAVE A COARSE AGGREGATE GRADATION CONFORMING TO SIZE No. 67. POLYPROPYLENE 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.

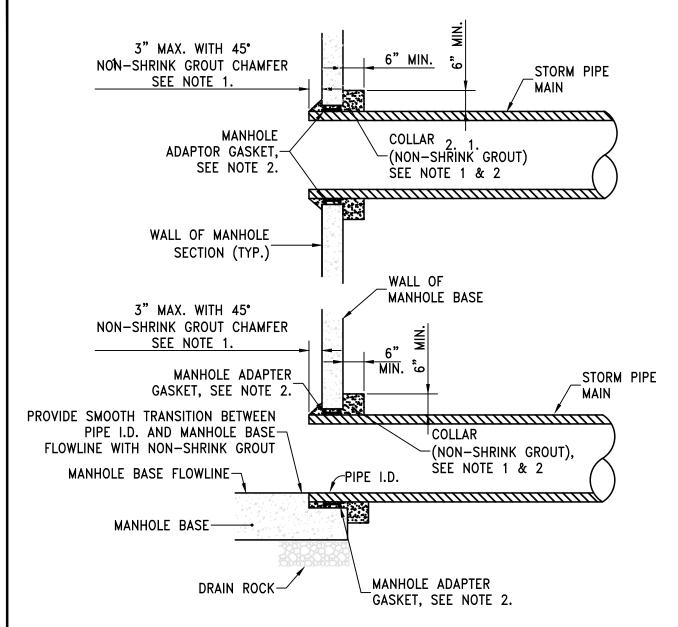
- CIRCUMSTANCES MAY REQUIRE THE NEED FOR SPECIAL TYPES OF TOP OF MANHOLE CONFIGURATIONS SUCH AS FLAT TOP, ABOVE GROUND, ETC. AS DIRECTED BY THE CITY OF SPARKS, DETAILED PLANS OF ANY SPECIAL TOP OF MANHOLE CONFIGURATIONS AND ASSOCIATED COLLARS MUST BE APPROVED BY THE CITY ENGINEER.
- . IN UNPAVED AREAS, IT SHALL BE NECESSARY TO SET THE MANHOLE RIM APPROXIMATELY 6 INCHES ABOVE THE SURROUNDING AREA. INSTALL A 6 INCH THICK RING OF CONCRETE. TAPERED AT A 3:1 SLOPE, FROM THE TOP, OUTSIDE EDGE OF THE COLLAR TO THE EXISTING GROUND SURFACE.
- . EXISTING SANITARY SEWER MANHOLE LIDS LOCATED IN GUTTER PANS, SHALL HAVE NEW WATER TIGHT FRAMES AND COVERS.
- ALL GRADE RING JOINTS ARE TO BE GROUTED WITH NON-SHRINK GROUT HAVING 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 SSPWC, AS ADOPTED BY CITY COUNCIL.
- . ALL GRADE RINGS SHALL BE PORTLAND CEMENT CONCRETE. PVC GRADE RINGS ARE NOT ALLOWED. CONTRACTOR SHALL USE AS FEW GRADE RINGS AS POSSIBLE TO REACH REQUIRED DEPTH. HOWEVER IN NO CASE SHALL THE QUANTITY EXCEED 4 GRADE RINGS WITHOUT APPROVAL OF THE CITY ENGINEER.
- 7. P.C.C. COLLARS IN ALL ROADWAYS SHALL BE PROTECTED FROM TRAFFIC LOADS UNTIL MINIMUM 3000 PSI IS

ATTAINED.			
STANDARD DETAIL	S FOR PUBLIC WORKS CONSTRUCTION	DRAWING	No.
City of City of	MANHOLE COLLAR	S-21	0A
		APPROVED BY: JE	DATE: 1/2020



- 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 ROMAC STYLE "LCT" MANHOLE ADAPTOR GASKET OR APPROVED EQUAL IN CONJUNCTION WITH NON-SHRINK GROUT.
- . 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.

	STANDARD DETAIL	LS FOR PUBLIC WORKS CONSTRUCTION	DRAWING	No.	
S	City of DAKS	SANITARY SEWER PIPE TO MANHOLE CONNECTION	S-211	IA	1
		10 11/1/1022 0011112011011	APPROVED BY: JE	DATE: 1/2020	7



NOTE:

- 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 SSPWC 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 WATERTIGHT 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 DETAILS FOR PUBLIC WORKS CONSTRUCTION		DRAWING No.
O City of City of	STORM DRAIN PIPE TO MANHOLE CONNECTION	S-211B
	WATER CONTROL	APPROVED BY: JE DATE: 1/2020

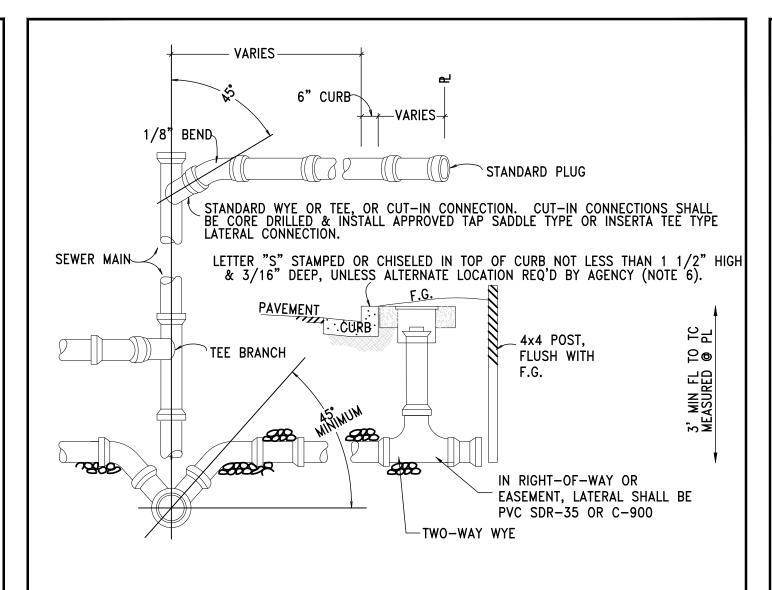
WALL OF MANHOLE BASE. RESILIENT FLEXIBLE CONNECTOR. -SEWER MAIN PROVIDE SMOOTH TRANSITION BETWEEN PIPE I.D. AND-MANHOLE BASE FLOWLINE. MANHOLE BASE FLOWLINE -MANHOLE BASE ---DRAIN ROCK— RESILIENT FLEXIBLE CONNECTOR. SEE DETAIL 'A'-**SECTION** %" MAX GAP PROVIDE SMOOTH TRANSITION AT FLOWLINE BETWEEN PIPE I.D. AND-MANHOLE BASE FLOWLINE. PIPE I.D MANHOLE BASE FLOWLINE-MANHOLE BASE-BOTTOM OF CORED OR FORMED MANHOLE OPENING PER--DO NOT GROUT MANUFACTURER'S REQUIREMENTS. RESILIENT FLEXIBLE CONNECTOR, SEE NOTE 2. DETAIL 'A'

COVER UPON ADJUSTMENT APPROVAL BY CITY OF SPARKS.

STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION

- 1. A SEAL OR WATER STOP IS REQUIRED ON ALL SANITARY SEWER INSTALLATIONS AND IN OTHER APPLICATIONS AS REQUIRED BY THE CITY TO PROVIDE A WATERTIGHT CONNECTION.
- 2. A RESILIENT FLEXIBLE CONNECTOR PER ASTM C 923-89 SHALL BE USED AT THE MANHOLE/PIPE CONNECTION TO SATISFY THE REQUIREMENTS OF NOTE 1. FOR PRE-CAST CONCRETE STRUCTURES, THE RESILIENT FLEXIBLE CONNECTOR SHALL BE AN "A-LOK" TYPE PIPE-TO-MANHOLE CONNECTOR OR APPROVED EQUAL. FOR CAST-IN-PLACE STRUCTURES, THE RESILIENT FLEXIBLE CONNECTOR SHALL BE A "KOR-N-SEAL I - TOGGLE KORBAND" TYPE PIPE-TO-MANHOLE CONNECTOR OR APPROVED EQUAL.
- 3. THE INTERIOR MANHOLE CONNECTION SHALL HAVE A SMOOTH TRANSITION BETWEEN PIPE I.D. AND MANHOLE BASE FLOWLINE. NO GROUT OR CONCRETE SHALL BE PLACED AROUND THE RESILIENT FLEXIBLE CONNECTOR.

STANDARD DETAI	LS FOR PUBLIC WORKS CONSTRUCTION	DRAWING	No.
City of parks	RESILIENT FLEXIBLE CONNECTOR	S-21	1C
		APPROVED BY: JE	DATE: 1/2020



- 1. SEWER LATERALS SHALL HAVE A MINIMUM SLOPE OF 2%, UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER.
- 2. LATERAL SHALL BE CUT BACK TO SOUND MATERIAL FOR COUPLING.
- ALL CONNECTIONS TO THE CITY SEWER MAINS MUST BE CORE DRILLED.
- 4. ENCASE LATERAL CONNECTION IN CEMENT, STABILIZED SAND OR 2000 PSI CONCRETE FOLLOWING INSTALLATION. CONNECTION MUST BE INSPECTED BY CITY PRIOR TO BACKFILL.
- 5. NO LATERAL CONNECTIONS SHALL BE MADE TO SANITARY SEWER "INTERCEPTOR" LINES WITHOUT THE APPROVAL OF THE CITY ENGINEER.
- THE UNIFORM PLUMBING CODE.

6. ALL APPLICABLE SANITARY SEWER PIPE INSTALLATION WORK SHALL BE IN ACCORDANCE WITH

STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION		DRAWING No.
City of parks	SANITARY SEWER LATERAL	S-212A
7)		APPROVED BY: JE DATE: 1/2020

NOTES:

- 1. SEWER LATERALS SHALL HAVE A MINIMUM PIPE DIAMETER OF 4-INCHES.
- ALL PLASTIC PIPE USED FOR SEWER SERVICE LATERAL CONSTRUCTION SHALL BE SOLID WALL AND SHALL MEET THE REQUIREMENTS OF D-2412, HAVE A MINIMUM STIFFNESS OF 46 PSI AS DEFINED BY THE REQUIREMENTS OF ASTM D-3034.
- SERVICE LATERALS SHALL HAVE A MINIMUM SLOPE OF 1/4-INCH PER FOOT UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER.
- SEWER LATERALS SHALL HAVE A MINIMUM COVER OF 36-INCHES IN THE PUBLIC RIGHT-OF-WAY AND IN EASEMENTS UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER. THE DEFINITION OF "COVER" IS THE DISTANCE FROM THE TOP OF PIPE TO FINISHED GRADE.
- MAIN CONSTRUCTION. WHEN A TAP SADDLE CONNECTION IS TO BE USED ON AN EXISTING SEWER MAIN, IT SHALL BE A WYE SADDLE AND BE INSTALLED PER DETAIL S-212C.

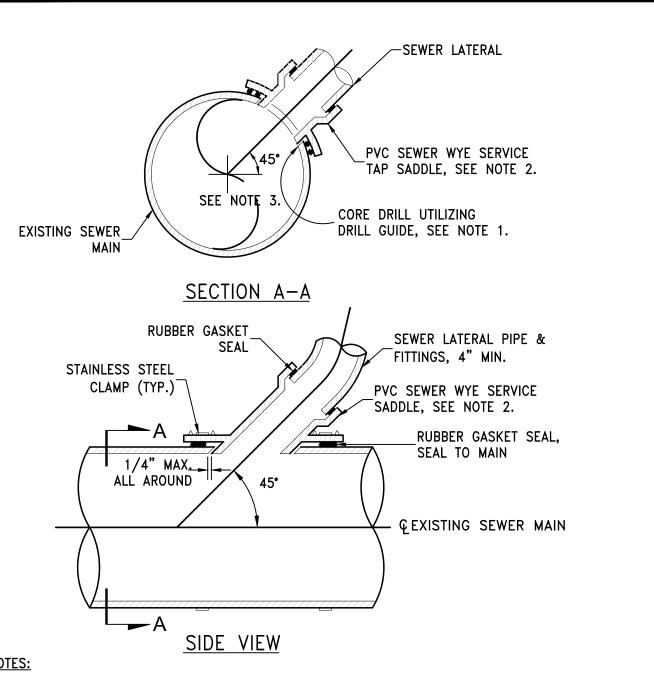
USE OF SEWER SERVICE TAP SADDLE CONNECTIONS SHALL NOT BE ALLOWED FOR NEW SEWER

- SEWER LATERALS SHALL HAVE A CLEANOUT INSTALLED BETWEEN SIDEWALK AND RIGHT-OF-WAY. A G5 BOX CLEARLY MARKED "SEWER" SHALL BE INSTALLED OVER THE TOP OF THE CLEANOUT RISER CAP PIPE.
- SEWER LATERALS SHALL NOT BE CONNECTED DIRECTLY TO OR WITHIN 5-FEET OF A MANHOLE EXISTING SEWER LATERALS SHALL BE CUT BACK TO SOUND MATERIAL FOR COUPLING. PLACE
- 6-INCH THICK CONCRETE PAD UNDER CONNECTION. SEWER LATERAL CONNECTION SHALL BE STABILIZED WITH APPROVED MATERIAL FOLLOWING
- INSTALLATION. CONNECTION TO CITY SEWER MAIN MUST BE INSPECTED BY THE CITY PRIOR TO NO LATERAL CONNECTIONS SHALL BE MADE DIRECTLY TO A SANITARY SEWER "INTERCEPTOR"
- UNLESS APPROVED BY THE CITY ENGINEER. 11. SEWER LATERALS SHALL NOT BE CONNECTED TO A SEWER MAIN UNLESS THE CONNECTION POINT
- 12. EACH INDIVIDUAL PARCEL SHALL HAVE A MINIMUM OF ONE SEWER LATERAL. TWO OR MORE PARCELS SHALL NOT SHARE ONE SEWER LATERAL.

IS BETWEEN TWO MANHOLE STRUCTURES.

- 13. SANITARY SEWER LATERAL IDENTIFICATION AND LOCATING REQUIREMENTS SHALL BE PER SPARKS MUNICIPAL CODE 17.16.130 (SMC 17.16.130).
- DISCONTINUANCE OF USE OF AN EXISTING SEWER LATERAL REQUIRES ABANDONMENT OF THE LATERAL. CUT, REMOVE 1-FOOT OF EXISTING LATERAL AND CAP BOTH ENDS OF THE EXISTING SEWER LATERAL TO BE ABANDONED WITHIN 6-INCHES OF THE SEWER MAIN. ABANDONMENT MUST BE INSPECTED BY CITY PRIOR TO BACKFILL.
- 15. PROPERTY OWNER SHALL BE RESPONSIBLE FOR OPERATION, MAINTENANCE AND REPAIR OF THE SEWER LATERAL WITHIN THE PUBLIC RIGHT-OF-WAY PER SPARKS MUNICIPAL CODE.

STANDARD DETAI	DRAWING No.	
City of parks	NOTES - SANITARY SEWER	S-212B
		APPROVED BY: JE DATE: 1/2020



. EXISTING SEWER MAINS SHALL BE CORE DRILLED UTILIZING A DRILL GUIDE FOR A WYE SADDLE AND A CORE DRILL WITH A LENGTH EXCEEDING THE LATERAL DIAMETER, INSERT—A—DRILL IDY75 & EXTRA LONG HOLE SAW OR APPROVED EQUAL. DIAMOND CORE BITS SHALL BE USED ON NON-PVC MAINS.

. SERVICE TAP SADDLES SHALL BE INSERTA-TEE OR APPROVED EQUAL. A ROMAC STYLE "CB" SEWER SADDLE OR APPROVED EQUAL MAY BE USED ON EXISTING SEWER MAINS ONLY WHEN MAIN IS NOT

. SADDLES SHALL BE INSTALLED AT 45 DEGREES TO MAIN AS SHOWN IN SECTION A-A. IN NO CASE SHALL A LATERAL CONNECTING TO THE EXISTING SEWER MAIN BE LOCATED DIRECTLY ON TOP OF THE PIPE, NOR SHALL IT MATCH THE FLOWLINE OF THE PIPE.

4. USE INSERTA-TEE OR APPROVED EQUAL.

STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION DRAWING No. SANITARY SEWER S-212C TAP SADDLE APPROVED BY: JE DATE: 1/2020

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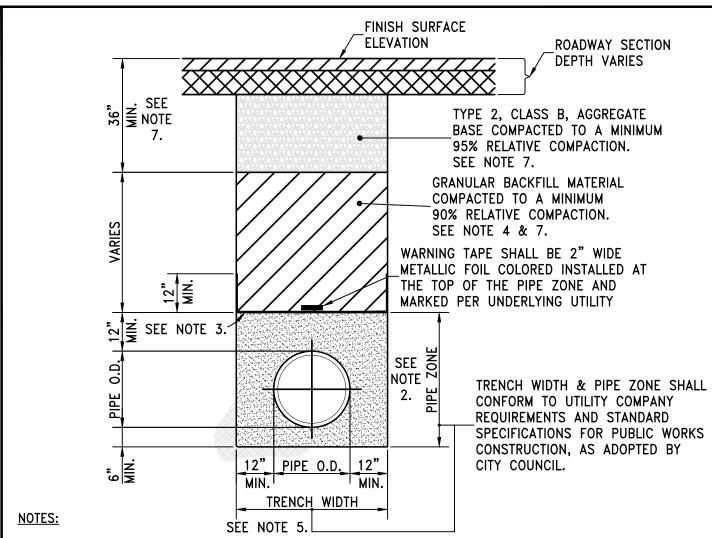
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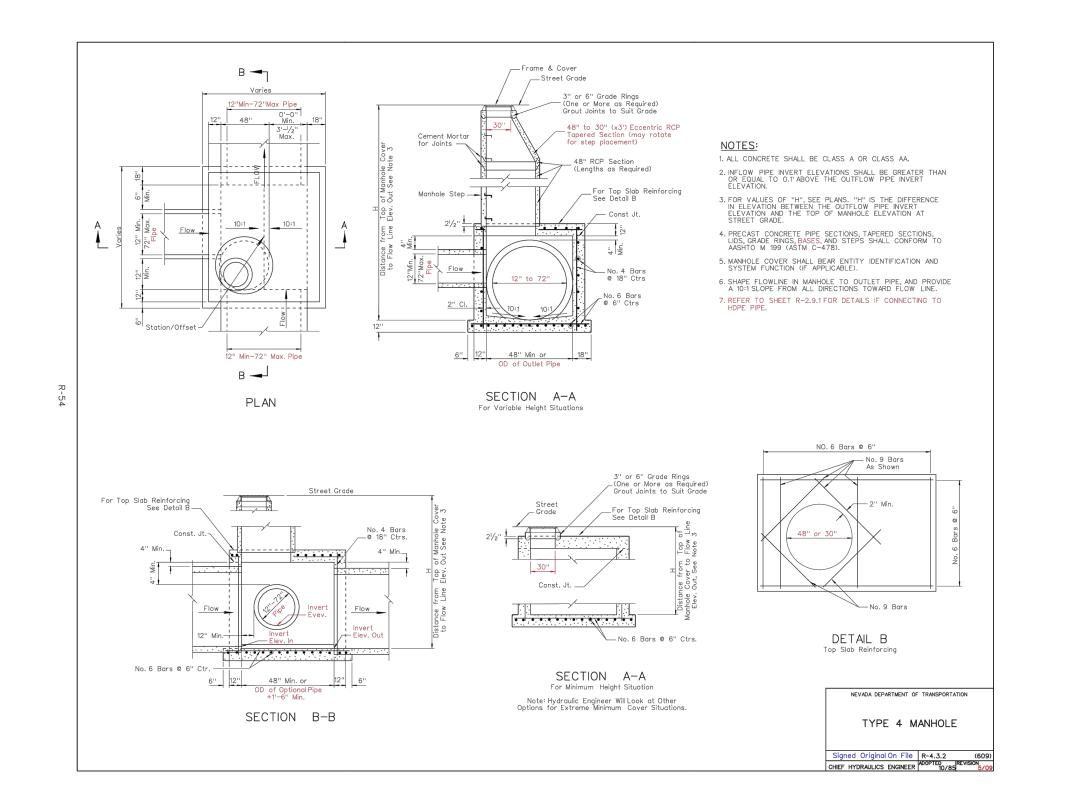
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- 1. ALL MATERIALS AND INSTALLATION PROCEDURES SHALL BE IN ACCORDANCE WITH STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (SSPWC), AS ADOPTED BY CITY COUNCIL.
- 2. BEDDING MATERIAL SHALL CONFORM TO OWNING-UTILITY COMPANY REQUIREMENTS AS APPROVED 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.
- 3. CLASS C BEDDING REQUIRES INSTALLATION OF GEOTEXTILE FABRIC BETWEEN PIPE ZONE AND BACKFILL MATERIAL. GEOTEXTILE FABRIC SHALL BE MIRAFI 180N OR APPROVED EQUAL.
- 4. 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.
- 5. ALL EXCAVATIONS SHALL CONFORM TO THE LATEST O.S.H.A. REQUIREMENTS.
- 6. EXISTING PIPE TO BE ABANDONED SHALL BE GROUT FILLED OR COMPLETELY REMOVED.
- 7. 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.
City of City of	TRENCH EXCAVATION/BACKFILL	S-11	7
	LACAVATION/DACKITLL	APPROVED BY: JE	DATE: 1/2020



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895 ROBERTA LANE, SUITE 104, SPARKS, NV 89431 (775) 359–3303 FAX (775) 359–3329 ODYSSEYRENO.COM

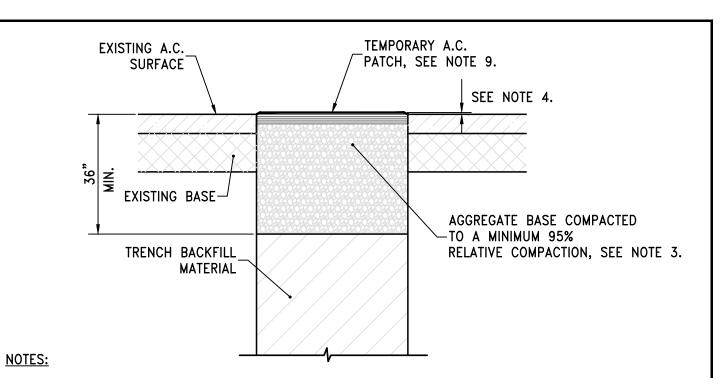
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BY STAN (775) 359–3303 ODYSEYRENO.COM

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- 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 PAVEMENT. IF NOT PATCHED WITHIN 24 HOURS AFTER BACKFILLING, THE CITY MAY PATCH AND BACK-CHARGE THE PERMITTEE FOR ALL COSTS.
- 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. ANY 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.
- 9. ALL TEMPORARY PATCHES ON ALL STREETS SHALL BE HOT-MIX ASPHALT A MINIMUM OF 3" THICK.
- 10. PLATES MAY BE USED UPON APPROVAL FROM THE CITY ENGINEER.

SIDEWALK

BACK OF LANDING

WING LENGTH VARIES

DETECTABLE TRUNCATED

DOMES SHALL BE PLACED

ON 6" MIN. P.C.C.

DETECTABLE TRUNCATED

STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION

ON 6" MIN. P.C.C.

DOMES SHALL BE PLACED

15' MAX

CURB HEIGHT VARIES

0" MIN. 6" MAX.

6" P.C.C. MIN.-

STANDARD DETAI	LS FOR PUBLIC WORKS CONSTRUCTION	DRAWING	No.
City of	TEMPORARY A.C.	S-11	6
sparks	TRENCH PATCH	APPROVED BY: JE	DATE: 1/2020
		ALLINOVED DI. JE	DATE: 1/ 2020

DETECTABLE TRUNCATED

MATERIALS SEE NOTE 8.

-DOMES FOR APPROVED

' MIN. LANDING

OF LANDING

SEE NOTE 13. SECTION A-A

4' x 5' MIN. LANDING

SEE NOTE 13. SECTION B-B

PEDESTRIAN RAMP

4" MAX.

CURB AT BACK

CURB &

GUTTER

SIDEWALK

FINISH GRADE

6" MIN. AGGREGATE BASE

-COMPACTED TO A MINIMUM

95% RELATIVE COMPACTION

NOTE

6" MIN. AGGREGATE BASE

-COMPACTED TO A MINIMUM

95% RELATIVE COMPACTION

DRAWING No.

S-106A

FINISH GRADE

WING LENGTH VARIES

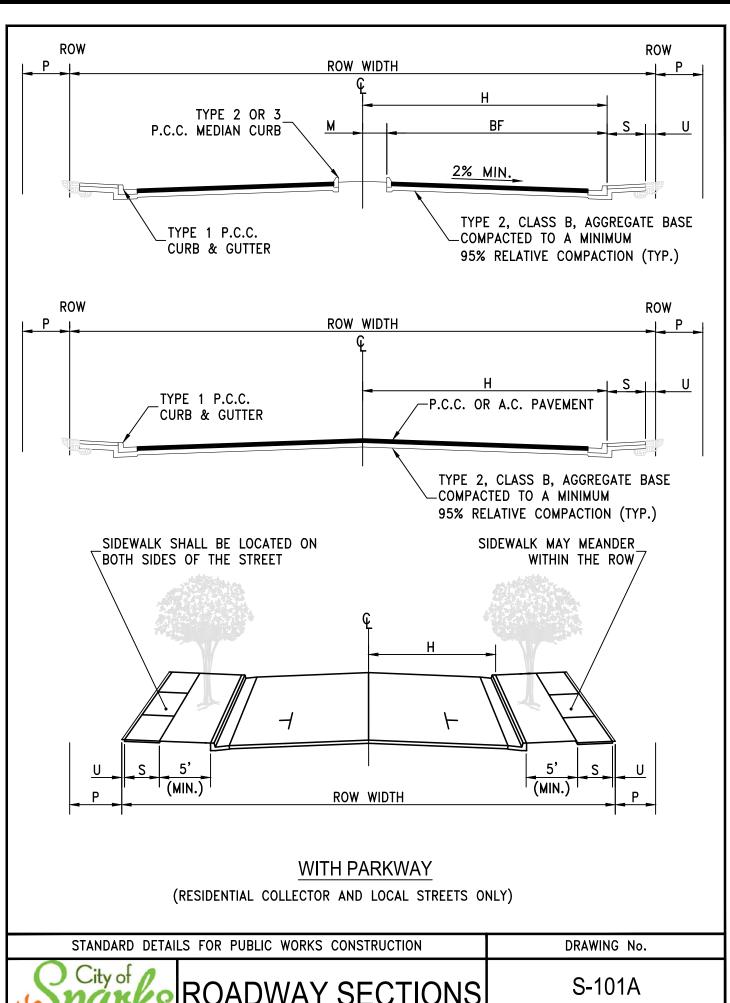
15' MAX

CURB LINE

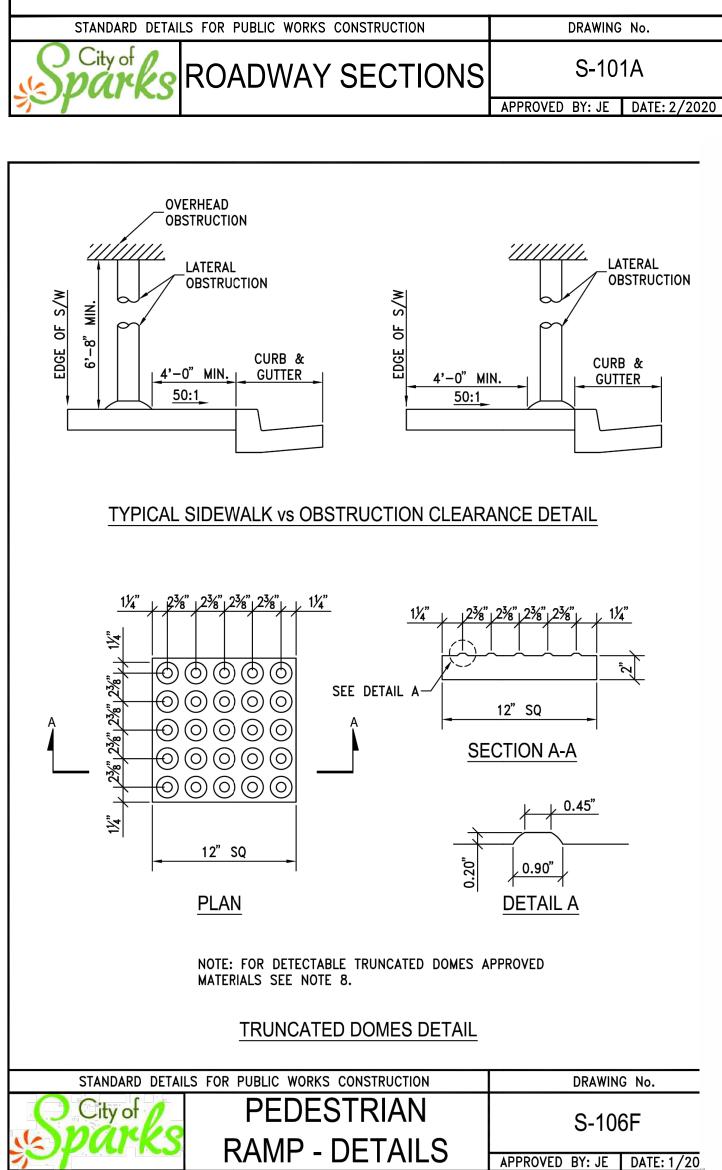
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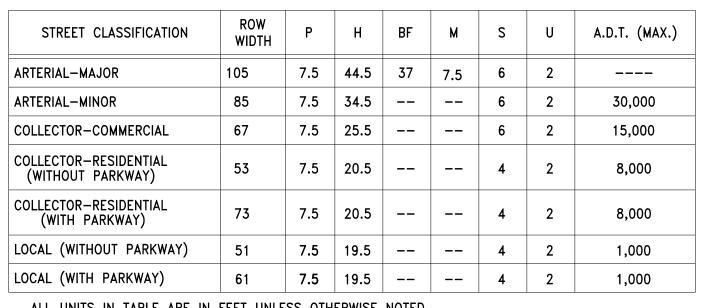
NOTE NOTE

EXISTING SIDEWALKS APPROVED BY: JE | DATE: 1/2020



(RESIDENTIAL COLLECTOR AND LOCAL STREETS OF	NLT)		8. ADDITIONAL EASE	MENTS MAY BE REQUIRED FOR CITY CONDU
ANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION	DRAWING No.		STANDARD DETAIL	LS FOR PUBLIC WORKS CONSTRUCTION
ROADWAY SECTIONS	S-101A APPROVED BY: JE DATE: 2/2020	3	Sparks	NOTES - ROADWAY SECTIONS





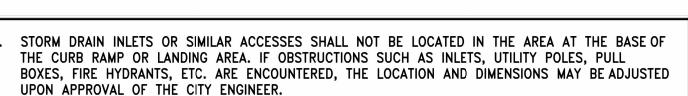
ALL UNITS IN TABLE ARE IN FEET UNLESS OTHERWISE NOTED.

<u>ABBREVIATIONS:</u>

- A.D.T AVERAGE DAILY TRAFFIC
- ROW RIGHT OF WAY WIDTH
- CENTERLINE OF ROW PRIVATE UTILITY EASEMENT WIDTH
- HALF STREET WIDTH (BACK FACE OF CURB TO CENTERLINE OF ROW)
- MEDIAN ISLAND WIDTH
- HALF STREET WIDTH WITH MEDIAN ISLAND (BACK FACE OF CURB TO BACK FACE OF CURB)
- SIDEWALK WIDTH DISTANCE FROM BACK OF SIDEWALK TO ROW

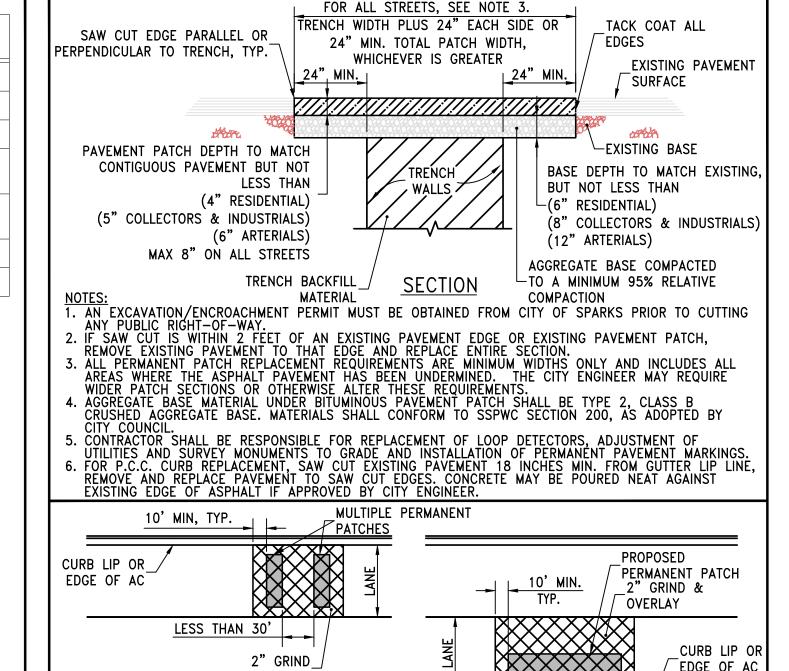
- 1. BF AND H ARE MEASURED TO THE BACK FACE OF CURB.
- 2. CURB & GUTTER SECTIONS SHALL BE POURED SEPARATELY FROM SIDEWALK SECTIONS.
- STRUCTURAL SECTION TO BE DETERMINED BY ENGINEERING DESIGN BASED ON RESILIENT MODULUS TESTING, BUT IN NO CASE SHALL THE A.C. BE LESS THAN 4" OVER 6" BASE.
- 4. ADDITIONAL ROW MAY BE REQUIRED ON ARTERIAL STREETS AND AT INTERSECTIONS.
- WIDER SIDEWALKS ARE TO BE PROVIDED WHEN REQUIRED BY THE CITY ENGINEER. SIDEWALKS ARE TO BE A MINIMUM 4' WIDE FOR RESIDENTIAL DEVELOPMENT AND 5' FOR COMMERCIAL DEVELOPMENT. A 60" WIDE PASSING AREA IS REQUIRED EVERY 200'.
- ACCESS LOCATIONS AND CONFIGURATIONS SHALL BE PER THE ACCESS MANAGEMENT STANDARDS ESTABLISHED IN THE REGIONAL TRANSPORTATION PLAN FOR REGIONAL ROADS AND BASED ON THE TRB ACCESS MANAGEMENT MANUAL, CURRENT EDITION FOR ROADWAYS UNDER CITY OF SPARKS JURISDICTION UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER.
- REFER TO ADDITIONAL INFORMATION ON WIDTHS AND REQUIREMENTS FOR RESIDENTIAL COLLECTORS, LOCAL STREETS, ALLEYS, PERMANENT EMERGENCY ACCESS AND SHARED DRIVEWAYS AS CONTAINED IN THE CITY OF SPARKS DESIGN MANUAL.

STANDARD DETAIL	LS FOR PUBLIC WORKS CONSTRUCTION	DRAWING No.	
City of parks	NOTES - ROADWAY SECTIONS	S-101B	1
		APPROVED BY: JE DATE: 2/2020	_



- 2. NO LIP SHALL BE PERMITTED AT THE CURB RAMP SLOPE TO GUTTER PAN.
- 3. PLANTMIX BITUMINOUS SURFACE SHALL BE FLUSH WITH THE EDGE OF THE GUTTER PAN IN THE AREA OF THE CURB RAMP.
- 4. ROUGH BROOM TEXTURE ON CURB RAMPS AND WINGS.
- 5. DETECTABLE WARNING SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS AND SHALL BE PLACED ON MIN. SIX (6") INCHES OF P.C.C.
- 6. ALL SLOPE RATES ARE RELATIVE TO LEVEL AND SHALL COMPLY WITH THE PUBLIC RIGHT-OF-WAY ACCESSIBILITY GUIDELINES (PROWAG) STANDARDS.
- 7. GUTTER SHALL MAINTAIN POSITIVE DRAINAGE TO PREVENT PONDING.
- 8. DETECTABLE WARNING SHALL CONSIST OF PRECAST WETSET TILES WITH MIN. SIZE OF 2' X 2', COLOR YELLOW. APPROVED PRODUCTS INCLUDE: "CASTINTACT 3", "TEKWAY DOME-TILES", "ADA SOLUTIONS", AND "ACCESS TILE". DETECTABLE WARNING SURFACES SHALL EXTEND THE FULL WIDTH OF THE RAMP RUN (EXCLUDING ANY FLARED SIDES), BLENDED TRANSITION, OR TURNING SPACE. DETECTABLE WARNING SHALL BE CONSTRUCTED PER MANUFACTURER'S INSTALLATION GUIDELINES AND CONFORM TO ADAAG.
- 9. CONCRETE REMOVAL SHALL BE TO NEAT SAW CUT LINES
- 10. AGGREGATE BASE MATERIAL UNDER PEDESTRIAN RAMPS SHALL BE TYPE 2, CLASS B CRUSHED AGGREGATE BASE. MATERIALS SHALL CONFORM TO SSPWC SECTION 200, AS ADOPTED BY CITY COUNCIL.
- 11. 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 0.45, AIR ENTRAINMENT 6% \pm 1.5%, SLUMP AT 1 TO 4 INCHES. MIX DESIGN SHALL CONFORM TO THE REQUIREMENTS OF SECTION 337 OF STANDARD SPECIFICATIONS OF PUBLIC 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. POLYPROPYLENE 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.
- 12. CONTRACTORS SHALL CORRECT ANY GRADE CONFLICT WITH EXISTING BOXES. THE CITY ENGINEER SHALL MAKE THE FINAL DETERMINATION REGARDING THE DEGREE OF MODIFICATIONS REQUIRED BY THE CONTRACTOR FOR GRADE CONFLICTS BETWEEN EXISTING BOXES AND NEW PEDESTRIAN RAMPS.
- 13. SIDEWALK AT BOTH SIDES OF RAMP MAY BE RECONSTRUCTED TO MINIMIZE THE GRADE AT A HORIZONTAL DISTANCE TO BE DETERMINED IN THE FIELD, UPON APPROVAL OF THE CITY ENGINEER, SUBJECT TO PROWAG REQUIREMENTS. CURB AT THE BACK OF WALK MAY BE NEEDED. A TRANSITION SECTION OF SIDEWALK MAY BE NECESSARY TO MATCH CROSS SLOPE OF EXISTING SIDEWALK TO PEDESTRIAN RAMP IMPROVEMENTS. TRANSITION SECTIONS SHALL BE APPROVED BY THE ENGINEER PRIOR TO INSTALLATION.

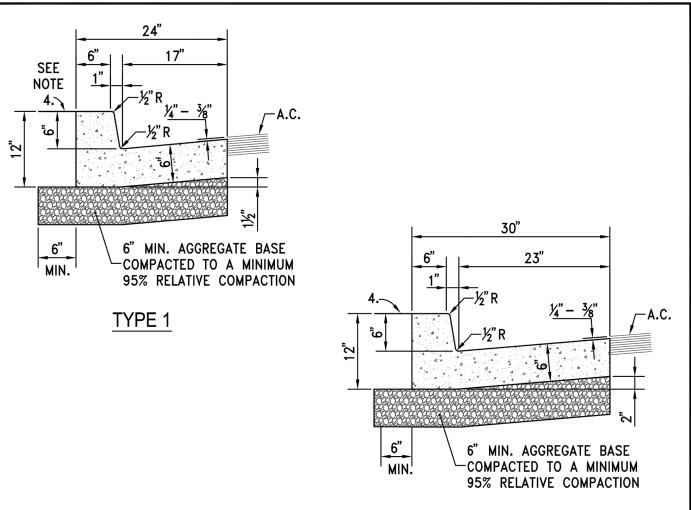
STANDARD DETAIL	LS FOR PUBLIC WORKS CONSTRUCTION	DRAWIN	G No.
City of /	NOTES -	S-10	6G
	PEDESTRIAN RAMP	APPROVED BY: JE	DATE: 3/2021
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EDGE OF AC & OVERLAY SEE NOTE 7.TRANSVERSE PATCHING SEE NOTE 8. LONGITUDINAL PATCHING

- <u>ALL STREETS WITH PAVEMENT CONDITION INDEX (PCI) GREATER THAN 65:</u>
- TRANSVERSE PATCHES SHALL INCLUDE A GRIND AND OVERLAY WHEREVER THERE ARE MULTIPLE PATCHES WITHIN 30 FEET OF EACH OTHER. 2" MINIMUM FOR RESIDENTIAL, COLLECTORS & INDUSTRIALS. 3" MINIMUM FOR ARTERIALS.
- 8. LONGITUDINAL PATCHES SHALL INCLUDE GRIND AND OVERLAY TO THE LANE LINES (BIKE, PARKING, OR TRAVEL). 2" MINIMUM FOR RESIDENTIAL, COLLECTORS & INDUSTRIALS. 3" MINIMUM FOR ARTERIALS.
- 9. DRIVEWAY & INTERSECTION LIMITS TO BE DETERMINED BY STREET CUT COORDINATOR.

STANDARD DETAIL	LS FOR PUBLIC WORKS CONSTRUCTION	DRAWING	No.
City of parks	PERMANENT BITUMINOUS PAVEMENT PATCH	S-11	5
7		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 0.45, AIR ENTRAINMENT 6% ±1.5%, SLUMP AT 1 TO 4 INCHES. MIX DESIGN SHALL CONFORM TO THE REQUIREMENTS OF SECTION 337 OF STANDARD SPECIFICATIONS OF PUBLIC 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. POLYPROPYLENE 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 AND BEHIND CURB AND GUTTER SHALL BE TYPE 2, CLASS B CRUSHED AGGREGATE BASE. MATERIALS SHALL CONFORM TO SSPWC SECTION 200, AS ADOPTED BY CITY
- 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.
- 4. 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 HORIZONTAL DISTANCE OF 12" FROM BACK FACE OF CURB AND COMPACT TO 90% RELATIVE COMPACTION.

5. FOR REPLACEMENT OF EXISTING CURB AND GUTTER, MATCH EXISTING TYPE.

P.C.C. S-109 CURB & GUTTER APPROVED BY: 15 DATE: 1/2020	STANDARD DETA	ILS FOR PUBLIC WORKS CONSTRUCTION	DRAWIN	G No.
CURB & GUTTER APPROVED BY: IF I DATE: 1/2020	City of	P.C.C.	S-109	9
ATTROVED BI. VE DATE: 1/2020	SP.M.RS	CURB & GUTTER	APPROVED BY: JE	DATE: 1/2020

TYPE 1A

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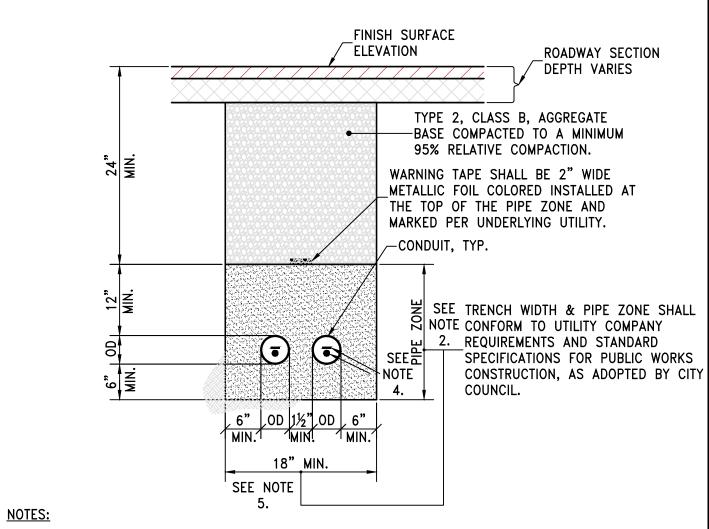
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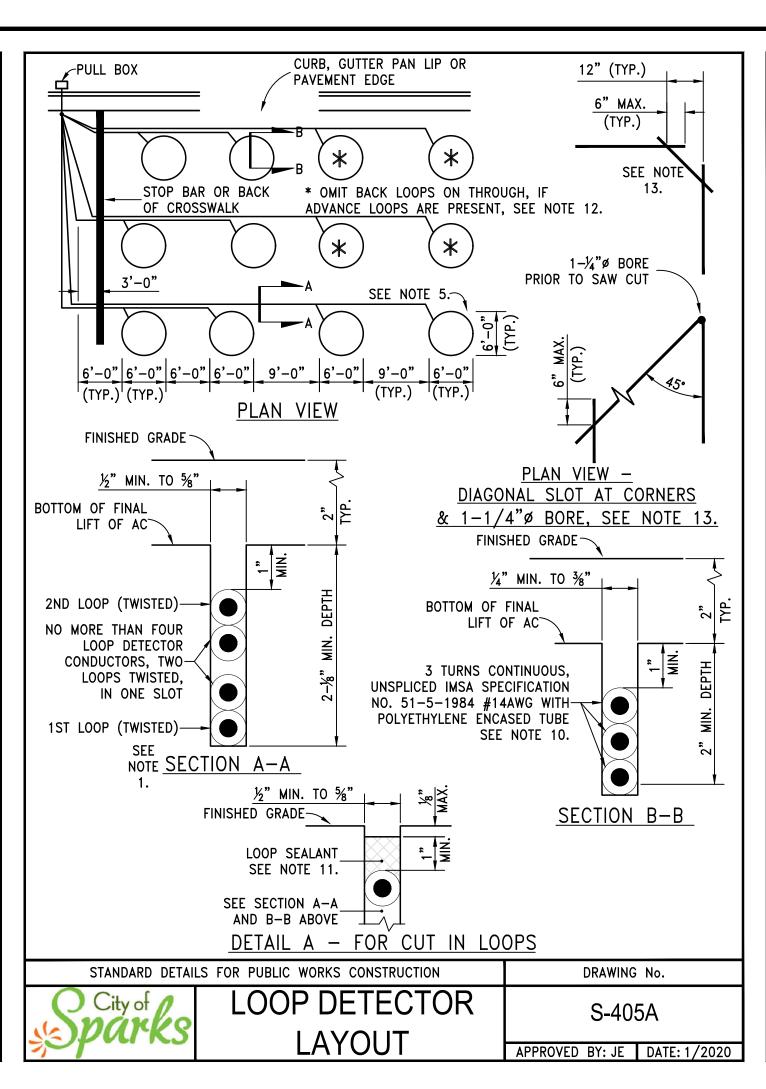


- ALL MATERIALS AND INSTALLATION PROCEDURES SHALL BE IN ACCORDANCE WITH STANDARD
- BEDDING MATERIAL SHALL CONFORM TO OWNING-UTILITY COMPANY REQUIREMENTS AS APPROVED BY THE CITY OF SPARKS. FOR CITY OWNED TRAFFIC AND LIGHTING UTILITIES, BEDDING MATERIAL SHALL BE CLASS A. COMPACTED TO MINIMUM 90% RELATIVE COMPACTION. MATERIALS SHALL CONFORM TO SSPWC SECTION 200.

SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (SSPWC), AS ADOPTED BY CITY COUNCIL.

- 3. CEMENT SLURRY BEDDING/BACKFILL SHALL NOT BE USED.
- 4. INSTALL LOCATE WIRE AND MULE TAPE FOR ALL FUTURE, UNUSED, OR FIBER-OPTIC CONDUITS. LOCATE WIRE SHALL BE 12 GAGE WIRE TERMINATED AT BOX & POLYESTER PULLING TAPE SHALL BE MULE TAPE OR APPROVED EQUAL.
- 5. ALL EXCAVATIONS SHALL CONFORM TO THE LATEST O.S.H.A. REQUIREMENTS.

		S CONSTRUCTION	DRAWING	No.
City of	TRAFFIC	& LIGHTING	S-40 ₄	4
sparks		IT TRENCH	APPROVED BY: JE	DATE: 1/2020

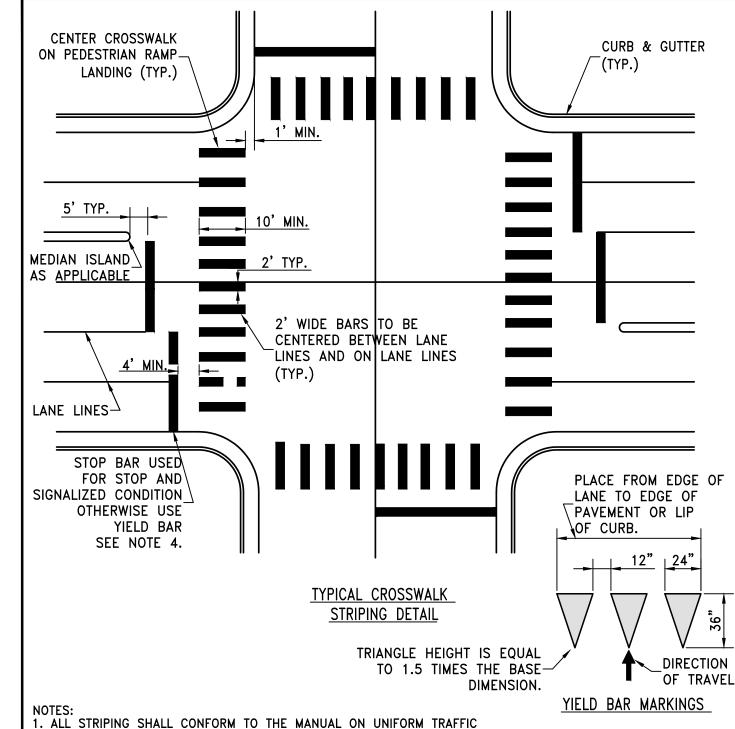


NOTES:

- WHERE NEW PAVEMENT SURFACES ARE PLACED, ALL TRAFFIC SIGNAL LOOP DETECTORS SHALL BE INSTALLED PRIOR TO THE PLACEMENT OF THE FINAL "TOP" LIFT OF THE PLANTMIX BITUMINOUS PAVEMENT MATERIAL. PLACEMENT OF SLURRY SEAL DOES NOT NEGATE THIS REQUIREMENT.
- SLOTS SHALL BE WASHED, BLOWN OUT AND THOROUGHLY DRIED BEFORE INSTALLING LOOP
- THE ADDITIONAL LENGTH OF EACH CONDUCTOR FOR EACH LOOP SHALL BE TWISTED TOGETHER INTO A PAIR (AT LEAST TWO TURNS PER FOOT) BEFORE BEING PLACED IN THE SLOT AND CONDUIT TO TERMINATION PULL BOX.
- 4. LOOPS SHALL BE CENTERED IN LANES.
- 5. LEFT TURN LOOP FARTHEST FROM FROM STOP BAR SHALL BE ON DEDICATED CHANNEL.
- WHERE LOOPS ARE TO BE OVERLAID WITH ASPHALT, THE LOOP SEALANT SHALL COMPLY WITH THE CITY OF SPARKS SIGNAL SPECIFICATIONS LOCATED ON CITY OF SPARKS TRAFFIC ENGINEERING PAGE.
- DISTANCE BETWEEN SIDE OF LOOP AND A LEAD-IN SAW CUT FROM ADJACENT DETECTORS SHALL BE TWO FEET MINIMUM. DISTANCE BETWEEN LEAD-IN SAW CUTS SHALL BE SIX INCHES MINIMUM. DISTANCE BETWEEN LEAD-IN SAW CUTS SHALL BE TWELVE INCHES FROM ANY CURB, GUTTER PAN LIP OR PAVEMENT EDGE.
- ALL WIRES SHALL BE IDENTIFIED IN PULL BOXES, WITH LOOP WIRES AS FOLLOWS: BLUE TAPE INDICATES LEFT TURN LANE LOOPS WITH ONE BAND IDENTIFYING LOOP ONE, TWO BANDS LOOP TWO, ETC. WHITE TAPE INDICATES THROUGH LANE LOOPS AND RED TAPE INDICATES RIGHT TURN LANES. IF THERE ARE TWO LEFT TURN LANES, YELLOW TAPE INDICATES THE LANE CLOSEST TO THE CENTER LANE OF THE STREET.
- ALL INDUCTIVE LOOPS ON A GIVEN CHANNEL SHALL BE CONNECTED IN SERIES. NO MORE THAN ONE LEAD IN CABLE SHALL BE CONNECTED TO A CABINET CHANNEL TERMINATION. NO MORE THAN SIX INDIVIDUAL LOOPS ARE TO BE CONNECTED TO ONE CHANNEL.
- 10. FOR LOOP LEAD IN CABLES GREATER THAN 500 FEET, LOOP IN LENGTH SHALL BE INSTALLED WITH FOUR (4) TURNS INSTEAD OF THREE (3).
- 11. LOOPS CUT INTO THE STREET SURFACE SHALL BE SEALED IN COMPLIANCE WITH THE CITY OF SPARKS SIGNAL SPECIFICATIONS LOCATED ON THE CITY OF SPARKS TRAFFIC ENGINEERING PAGE
- 12. LISTED BELOW ARE THE MINIMUM DISTANCES FOR ADVANCE LOOP DETECTOR PLACEMENT AS A FUNCTION OF POSTED SPEED LIMITS, MEASURED FROM THE STOP BAR TO THE REAR OF THE LOOP. SEE TABLE BELOW.
- SEE NOTE 12. OOPS. 13. 6 FOOT SQUARE LOOPS MAY BE SUBSTITUTED UPON APPRO

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		35	255		
		40	285		
		45	330		
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STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION DRAWING No. S-405B APPROVED BY: JE DATE: 1/2020



CONTROL DEVICES (MUTCD) FOR STREETS AND HIGHWAYS, LATEST EDITION.

2. PREFORMED THERMOPLASTIC PAVEMENT MARKINGS SHALL BE INSTALLED PER MANUFACTURERS
RECOMMENDATIONS AND IN ACCORDANCE WITH SECTION 634 OF THE LATEST EDITION OF "STANDARD" SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" PUBLISHED BY THE STATE OF NEVADA,
DEPARTMENT OF TRANSPORTATION (NDOT), EXCEPT ALL THERMOPLASTIC MARKINGS WILL BE 0.090 INCHES THICK, EXCEPT MARKING FOR BIKE LANES WHICH WILL BE 0.075 INCHES. HOT-APPLIED EXTRUDED THERMOPLASTIC SHALL NOT BE USED.

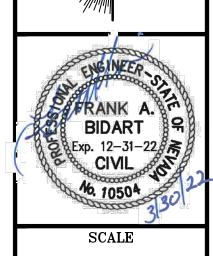
3. CROSSWALK MARKINGS SHALL BE INSTALLED AT ALL LOCATIONS AS DIRECTED BY ENGINEER.

4. PLACE 24" WIDE STOP BAR FOR SIGNALIZED CONTROL INTERSECTIONS. USE 24" WIDE STOP BAR FOR STOP CONTROL INTERSECTIONS. FOR YIELD CONDITION SEE YIELD MARKINGS ABOVE.

STANDARD DETAIL	S FOR PUBLIC WORKS CONSTRUCTION	DRAWING No.
City of	CROSSWALK	S-411
parks	LEGEND	APPROVED BY: JE DATE: 1/2020

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MAR. 2022
DRAWN BY:
E.C.W.
DESIGNED BY:
E.C.W.
CHECKED BY:
F.B.

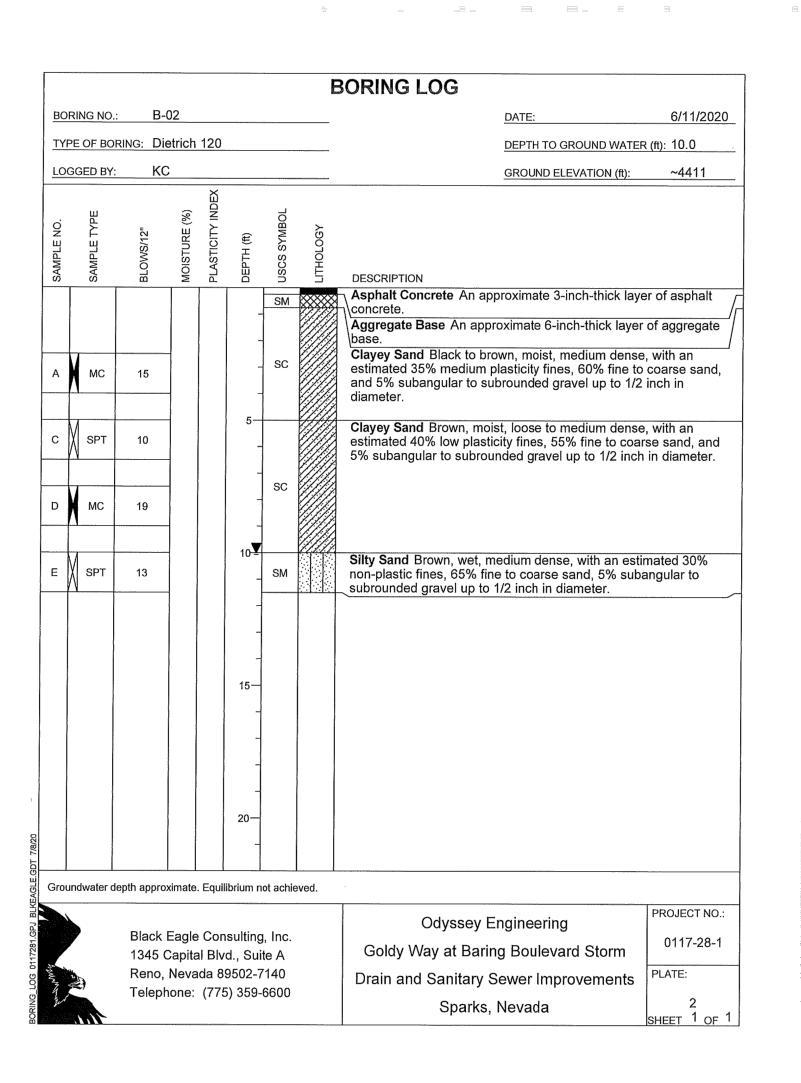


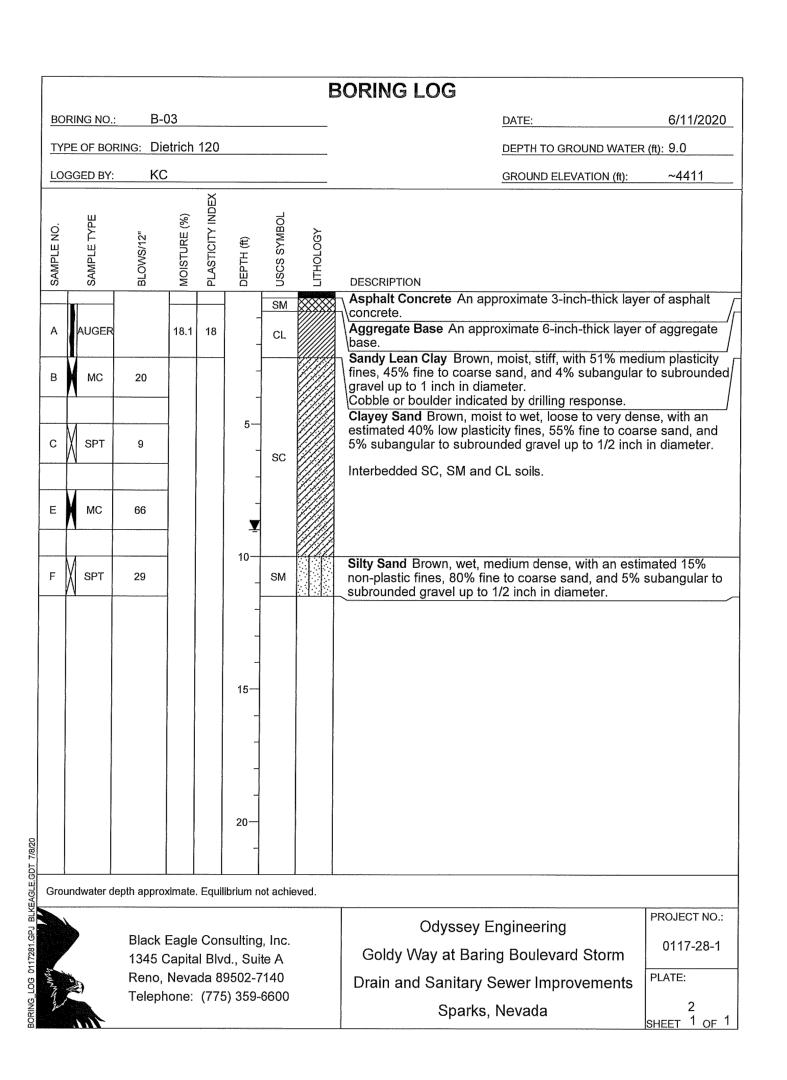
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March 31, 2022 - 09:08 Dwg Name: H:\COS STORM AND SEWER MASTER CIP\Production Drawings\CIP 6-3\C6.0 - CIVIL DETAILS.dwg Updated By: eric







BOI	RING NO.:	: B-	01					DATE: 6/11/2020
TYF	PE OF BOI	RING: Di	etrich	120				DEPTH TO GROUND WATER (ft): 8.5
LOC	GGED BY:	K	<u> </u>					GROUND ELEVATION (ft): ~4411
SAMPLE NO.	SAMPLE TYPE	BLOWS/12"	MOISTURE (%)	PLASTICITY INDEX	ОЕРТН (ft)	USCS SYMBOL	LITHOLOGY	DESCRIPTION
A C	SPT MC	15			5	SM SC CH		Asphalt Concrete An approximate 3-inch-thick layer of asphalt concrete. Aggregate Base An approximate 6-inch-thick layer of aggregate base. Clayey Sand Brown, moist, medium dense, with an estimated 25% low to medium plasticity fines, 70% fine to coarse sand, and 5% subangular to subrounded gravel up to 1/2 inch in diameter. Sandy Fat Clay Dark brown, moist, stiff, with an estimated 70% medium plasticity fines, 25% fine to coarse sand, and 5% subangular to subrounded gravel up to 1/2 inch in diameter. Silty Sand Dark brown, moist, loose, with an estimated 25% non-plastic fines, 70% fine to coarse sand, 5% subangular to subrounded gravel up to 1/2 inch in diameter.
D	SPT	45	36.8	NP	10-	ML		Sandy Silt Brown, moist to wet, hard, with 53% non-plastic fines, 31% fine to medium sand, and 11% subangular to subrounded gravel up to 1/2 inch in diameter. Clayey Sand Brown, wet, very dense, with an estimated 30%
	MC	59			15—	SC		low plasticity fines, 65% fine to coarse sand, and 5% subangular to subrounded gravel up to 1/2 inch in diameter.
}rou	ındwater d	epth appro	ximate	. Equil	ibrium n	ot achi	eved.	
in Mary		1345 Reno,	Capita Neva	al Blv ida 8	sulting d., Sui 9502-7 5) 359-	te A 140		Odyssey Engineering Goldy Way at Baring Boulevard Storm Drain and Sanitary Sewer Improvements Sparks, Nevada PROJECT NO.: 0117-28-1 PLATE: 2

GLENRANK A. A. BIDART Exp. 12-31-22 16. 10504 SCALE HORIZ. ____ VERT. ____ JOB NO. SHEET C5.6

2. LATEST EDITION OF THE TMWA GENERAL CONDITIONS SHALL APPLY AND CAN BE DOWNLOADED FROM TMWA'S WEBSITE AT:

http://tmwa.com/about_us/doingbusinesswithtmwa

3. THE CONTRACTOR SHALL OBTAIN COPIES OF THE TMWA ENGINEERING & CONSTRUCTION STANDARDS FOR HIS/HER USE. A COPY OF THE STANDARDS SHALL BE AVAILABLE AT THE JOB SITE AT ALL TIMES.

4. INSPECTION WILL BE BY THE ASSIGNED TMWA INSPECTOR. CONTRACTOR IS TO NOTIFY THE TMWA PROJECT REPRESENTATIVE AT LEAST FIVE BUSINESS DAYS BEFORE STARTING CONSTRUCTION.

5. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AND FEATURES AS SHOWN ON THESE IMPROVEMENT PLANS IS BASED UPON THE BEST INFORMATION AVAILABLE TO THE ENGINEER. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THESE LOCATIONS AND OR ELEVATIONS BY POTHOLING AT THE PROPOSED POINTS OF CONNECTION AND IN AREAS OF POSSIBLE CONFLICT PRIOR TO BEGINNING OF CONSTRUCTION. SHOULD THE CONTRACTOR FIND ANY DISCREPANCIES BETWEEN THE CONDITIONS EXISTING IN THE FIELD AND THE INFORMATION SHOWN ON THE IMPROVEMENT PLANS, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE TMWA ENGINEER. CONTRACTOR SHALL POTHOLE SUFFICIENTLY IN ADVANCE OF CONSTRUCTION TO ALLOW THREE (3) WORKING DAYS FOR TMWA ENGINEERING TO PREPARE A RE-DESIGN PLAN SHOULD A CONFLICT BE ENCOUNTERED. <u>ABSOULUTLEY NO STAND-BY TIME WILL BE PAID TO THE CONTRACOT DURING</u> THIS THREE (3) DAY RE-DESIGN PERIOD.

6. AT LEAST 3 WORKING DAYS BEFORE STARTING CONSTRUCTION. THE CONTRACTOR SHALL CALL UNDERGROUND SERVICE ALERT AT 811 AND REQUEST UTILITY MARKING. THE CONTRACTOR IS SOLEY RESPONSIBLE FOR THE COST OF REPAIRING EXISTING FACILITIES THAT ARE DAMAGED BY HIS/HER OPERATIONS.

7. ANY DISCREPANCIES BETWEEN THE IMPROVEMENT PLANS AND THE ACTUAL FIELD CONDITIONS SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE TMWA PROJECT MANAGER. PROCEEDING WITH WORK THAT DEVIATES FROM THE PLANS, EXCEPT FOR AN EMERGENCY LIFE-SAFETY CONDITION, SHALL BE AT THE SOLE RISK OF THE CONTRACTOR FOR THE COST TO REPLACE, IF DEEMED UNACCEPTABLE BY THE TMWA PROJECT MANAGER.

8. THE REMOVAL AND DISPOSAL OF EXISTING FACILITIES AND APPURTENANCES REQUIRED TO MAKE CONNECTIONS TO EXISTING MAINS/FACILITIES AND/OR FOR THE INSTALLATION OF NEW WATER FACILITIES SHALL BE CONSIDERED INCIDENTAL TO THE WORK WITH <u>NO DIRECT PAYMENT.</u> THE EXPOSED CUT ENDS OF THESE EXISTING FACILITIES THAT WILL BE ABANDONED IN PLACE SHALL BE PLUGGED WITH CONCRETE OR OTHER METHOD AS APPROVED BY THE TMWA INSPECTOR. COSTS FOR THESE ITEMS SHALL BE INCLUDED IN THE MOST APPROPRIATE BID ITEM. THIS ALSO INCLUDES REMOVAL AND DISPOSAL OF EXISTING VLAVE/CURB VALVE BOXES, CONDUCTOR PIPES, METER BOXES, AND ANY OTHER FACILITIES IDENTIFIED IN THE IMPROVEMENT PLANS, INCLUDING BACKFILL WITH TYPE 2, CLASS B CRUSHED AGGREGATE BASE AND PLACEMENT OF TEMPORARY HOT-MIX AC PAVEMENT PATCH PER TYPICAL TRENCH DETAIL.

9. ALL VALVES SHALL BE SUPPORTED WITH A CONCRETE PAD AND COLLAR AS DEPICTED IN TMWA STANDARD DETAIL 10J-2. CONCRETE COLLARS SHALL BE PLACED AS A PART OF THE CITY OF SPARKS ROADWAY REHABILITATION WORK AND ARE NOT REQUIRED ON THIS PROJECT. TEMP AC (4" MIN) PATCH SHALL BE PLACED TO SUPPORT VALVES IN THIS WATER MAIN REHABILITATION PROJECT IN LIEU OF CONCRETE COLLARS UNTIL ROADWAY REPAVING WORK IS COMPLETE. ALL VALVES SHALL THEN BE ADJUSTED TO GRADE AND CONCRETE COLLARS SHALL BE PLACED AS REQUIRED.

10. ALL SERVICE TAPS SHALL BE MADE USING A TAPPING MACHINE DESIGNED SPECIFICALLY FOR TAPPING PURPOSES WITH THE CORRECT CUTTING BIT FOR THE TYPE OF PIPE IN WHICH THE TAPS WILL BE MADE. THE USE OF A DRILL WITH HOLF-SAW BIT OR SIMILAR WILL NOT BE PERMITTED UNDER ANY CIRCUMSTANCES. TMWA TO PROVIDE HOT TAP LABOR FOR TAPS GREATER THAN

11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR JOB SITE SAFETY DURING CONSTRUCTION, AND ALL WORK SHALL CONFORM TO PERTINENT SAFETY REGULATIONS AND CODES, FENCE AND OR BARRICADE THE CONSTRUCTION AREA AS REQUIRED TO PROTECT ADJACENT SITES. VEHICULAR TRAFFIC AND PEDESTRIAN TRAFFIC. THE CONTRACTOR SHALL BE SOLELY AND COMPLETELY RESPONSIBLE FOR COMPLIANCE WITH ALL APPLICABLE PROVISIONS OF OSHA AND NRS CHAPTER 618, IN THE CONSTRUCTION PRACTICES FOR ALL EMPLOYEES DIRECTLY ENGAGED IN THE CONSTRUCTION OF THIS PROJECT.

12. LOCATE AND/OR PROTECT ALL EXISTING AND PROPOSED PIPING, UTILITIES, TRAFFIC SIGNAL EQUIPMENT (BOTH ABOVE GROUND AND BELOW GROUND),

GENERAL NOTES CONT.:

STRUCTURES ADJACENT TO STREETS, AND ALL OTHER EXISTING IMPROVEMENTS THROUGHOUT CONSTRUCTION.

13. ALL CONSTRUCTION SHALL BE CLOSELY COORDINATED WITH TMWA SO THAT THE QUALITY OF WORK CAN BE CHECKED FOR APPROVAL.

CONSTRUCTION PROCESS TO ELIMINATE EXCESSIVE PONDING AND/OR EROSION. 15. THE CONTRACTOR SHALL MAINTAIN THE SITE IN A NEAT AND ORDERLY MANNER THROUGHOUT THE CONSTRUCTION PROCESS. ALL MATERIALS SHALL BE STORED WITHIN APPROVED CONSTRUCTION AREAS ON PAVED SURFACES ONLY.

16. THE CONTRACTOR SHALL OBTAIN ALL PERMITS AS REQUIRED BY THE JURISDICTIONAL AGENCY, NOT SPECIFICALLY ADDRESSED IN THE PROJECT

14. INCORPORATE ADEQUATE DRAINAGE PROCEDURES DURING THE

17. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTION OF ALL EXISTING SURVEY MONUMENTS AND SHALL REPLACE ANY MONUMENTS OBLITERATED OR DAMAGED DURING CONSTRUCTION AT HIS EXPENSE, REPLACEMENT SHALL BE PERFORMED BY A LICENSED PROFESSIONAL LAND

18. ALL PIPE IDENTIFIED AS CONTAINING ASBESTOS CONTAINING MATERIALS (ACM) (TRANSITE PIPE) THAT IS NO LONGER IN SERVICE AS A RESULT OF THE PROPOSED IMPROVEMENTS SHALL BE REMOVED AND DISPOSED IN ACCORDANCE WITH THE ASBESTOS SPECIFICATIONS WITHIN THIS PLAN SET.

WATER GENERAL NOTES:

1. LOCATE ALL EXISTING UTILITIES WHICH MAY CONFLICT WITH THE NIEW WORK IN ADVANCE SO AS TO ALLOW ADJUSTMENT, REALIGNMENT AND/OR REDESIGN OF THE NEW WORK AROUND THE EXISTING UTILITY AND/OR STRUCTURE. UTILITY LINES WHICH CONFLICT WITH THE NEW WORK SHALL BE REROUTED AS REQUIRED AFTER UTILITY AGENCY APPROVALS ARE OBTAINED. TEMPORARY REROUTES SHALL BE MADE PERMANENT AFTER ALL NEW WORK HAS BEEN COMPLETED IN ACCORDANCE WITH APPLICABLE STANDARDS. REROUTING OF WATER LINES SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE AWWA STANDARDS.

2. CONTRACTOR SHALL UTILIZE EVERY MEANS POSSIBLE TO MINIMIZE WATER SERVICE OUTAGES TO CUSTOMERS. THE CONTRACTOR SHALL NOTIFY CUSTMERS OF PLANNED WATER OUTAGES AT LEAST 48 HOURS PRIOR TO AN OUTAGE. THE NOTICE SHALL INCLUDE THAT OUTAGES WILL OCCUR DURING THE DAY BETWEEN 9:00 AM AND 4:00 PM AND NAME AND PHONE NUMBER OF CONTRACTOR FOR QUESTIONS AND CONCERNS. ALL NOTICES SHALL BE POSTED ON NOTICE BOARDS AND PLACED FACING TRAFFIC AT ALL STRFFT FNTRANCES TO THE PROPOSED WORK AREAS. CONTRACTOR SHALL COORDINATE WITH OWNER FOR A LIST OF

3. THE CONTRACTOR SHALL BE RESPONSIBLE TO PROTECT THE INTEGRITY OF EXISTING WATER LINES DURING CONSTRUCTION.

4. ALL WATER MAINS SHALL BE TESTED FOR PRESSURE AND LEAKAGE PER AWWA C600 & C605 WITH THE EXCEPTION THAT THE PRESSURE LOSS DURING PRESSURE TESTING SHALL BE ZERO PSI. TEST PRESSURE SHALL BE 150 PSI.

5. DUCTILE IRON PIPELINES MUST BE PRESSURE TESTED ACCORDING TO AWWA STANDARD C600 AND PVC PIPELINES MUST BE PRESSURE TESTED ACCORDING TO AWWA STANDARD C605 PER NAC 445A.67145 (7). FOR OTHER MATERIALS, THE PIPELINES MUST BE PRESSURE TESTED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION PER NAC 445A.67145 (7)(c)

6. BACTERIOLOGICAL TESTING, DISINFECTION, AND FLUSHING, FOR POTABLE WATER LINE CONSTRUCTION, SHALL BE PERFORMED PER AWWA C651. THE OWNER SHALL BE RESPONSIBLE FOR PERFORMING AND FUNDING UP TO TOW BACTERIOLOGICAL TESTS PER RUN OF PIPE CONSTRUCTED. IF MORE THAN TWO TESTS ARE REQUIRED, THE COST SHALL BE PLACED UPON THE CONTRACTOR. TWO (2) BACTERIOLOGICAL TESTS SHALL BE CONDUCTED PER TEST SEGMENT. BÁCTERIOLOGICAL TEST SAMPLES WILL NOT BE COLLECTED ON FRIDAYS, WEEKENDS, TMWA OBSERVED HOLIDAYS, OR THE DAY BEFORE A TMWA OBSERVED HOLIDAY, UNLESS AUTHORIZED BY THE TMWA INSPECTOR.

7. PER NAC 445A.67145(6). WATER MAIN MUST NOT BE PLACED INTO SERVICE AFTER ITS INITIAL CONSTRUCTION UNTIL

7.1. THE WATER MAIN HAS BEEN DISINFECTED AND FLUSHED IN ACCORDANCE WITH AWWA STANDARD C651.

7.2. THE DISPOSAL OF ANY SPENT CHLORINE SOLUTIONS MUST BE COORDINATED WITH NDEP'S BUREAU OF WATER POLLUTION CONTROL (BWPC).

7.3. ANALYSES OF THE WATER MAIN WHICH INDICATE THAT THE WATER MEETS PRIMARY DRINKING WATER STANDARDS FOR COLIFORM BACTERIA (ABSENT FOR COLIFORM BACTERIA) HAVE BEEN OBTAINED AND REPORTED TO THE BSDW, PER AWWA STANDARD C651, TWO SETS OF CONSECUTIVE SAMPLES MUST BE TAKEN AT LEAST 24 HOURS APART FROM EVERY 1200 FEET OF MAIN, AT THE END OF THE LINE, AND FROM EACH BRANCH.

8. PROVIDE ALL MISCELLANEOUS PIPE, FITTINGS AND APPURTENANCES AS REQUIRED TO COMPLETE THE UTILITY WORK AS SHOWN.

9. CONTRACTOR SHALL SEAL ANY OPENINGS IN UNFINISHED PIPING OR APPURTENANCES AT THE END OF EACH WORKING DAY IN SUCH A MANNER AS TO PREVENT THE ENTRY OF BIRDS, OTHER ANIMALS, DIRT, TRENCH WATER, AND OTHER SOURCES OF POLLUTION OR CONTAMINATION.

10. NOTIFY THE FIRE DEPARTMENT OF FIRE HYDRANTS AFFECTED DURING

11. PIPELINE DEPTHS SHALL BE INSTALLED PER PLAN TO AVOID ADDITIONAL HIGHPOINTS IN THE WATERLINE AND TO SUPPORT AIR RELIEF VALVE LOCATIONS SHOWN IN THE PLANS.

12. CONTRACTOR SHALL VERIFY CONSTRUCTION METHODS AND OVERALL JOB APPROACH WITH TMWA AND ENGINEER PRIOR TO CONSTRUCTION.

WATER GENERAL NOTES CONT.:

13. SYMBOLS ARE NOT TO SCALE AND DO NOT NECESSARILY REPRESENT ACTUAL LOCATIONS OF FACILITIES.

14. THIS MAP ILLUSTRATES DATA COLLECTED FROM VARIOUS SOURCES AND MAY NOT REPRESENT A SURVEY OF THE PREMISES. NO RESPONSIBILITY IS ASSUMED AS TO THE SUFFICIENCY OR ACCURACY OF THE DATA DISPLAYED HEREON.

15. SOILS RETENTION MAY BE REQUIRED AROUND WATER METER BOXES, FIRE HYDRANTS, AND OTHER FACILITIES IF SLOPES EXCEED 15%.

16. UNUSED SERVICE LATERALS SHALL NOT BE CONNECTED TO NEW MAIN. 17. WATER SYSTEM SHALL CONFORM TO TMWA ENGINEERING & CONSTRUCTION STANDARDS, UNLESS MODIFIED HEREIN.

18. SUBMITTALS FOR ALL WATER PIPES AND APPURTENANCES SHALL BE SUBMITTED AND APPROVED BY TMWA PRIOR TO CONSTRUCTION.

18. PRODUCTS INTENDED FOR CONTACT WITH POTABLE WATER SHALL BE CERTIFIED TO THE REQUIREMENTS OF NSF/ANSI 61 AND BE CERTIFIED LEAD-FREE PER NAC 445A.65825 WHEN APPLICABLE. CERTIFICATION SHALL BE PROVIDED TO TMWA PRIOR TO INSTALLATION OF MATERIALS IN THE FIELD.

ASBESTOS CEMENT PIPE (ACP) REMOVAL. HANDLING AND DISPOSAL REQUIREMENTS:

REFERENCE SHEET CO.1 FOR ASBESTOS/TRANSITE PIPE REMOVAL REQUIREMENTS.

LEGEND

★ 11° ELBOW

22° ELBOW

45° ELBOW

◆ FIRE HYDRANT

FLUSH VALVE

⋖ REDUCER

VALVE

ASSY

BOT

BOV

CONST

DI OR DIP

FLG OR FL

CTS

DCDA

FCA

FVA

HDPE

PVC

RFCA

RJDIP

ABBREVIATIONS AIR RELEASE VALVE ASSEMBLY BOTTOM (OF PIPE) BLOW-OFF VALVE CENTERLINE CONSTRUCT COPPER TUBE SIZE DUCTILE IRON PIPE DIAMFTFR

DOUBLE CHECK DETECTOR ASSEMBLY FXISTING FLANGE COUPLING ADAPTER FIRE HYDRANT FLANGE

GATE VALVE HIGH POINT INVERT ELEVATION MECHANICAL JOINT MECHANICALLY RESTRAINED JOINT

OUTSIDE DIAMETER PROPERTY LINE PUSH ON PUBLIC UTILITY EASEMENT POLYVINYL CHLORIDE PIPE

RESTRAINED FLANGE COUPLING ADAPTER RESTRAINED JOINT DUCTILE IRON PIPE ROW OR R/W RIGHT OF WAY REDUCED PRESSURE BACKFLOW ASSEMBLY THRUST BLOCK

WATER CROSSING

→ 90° ELBOW

✓ AIR RELEASE VALVE BACKFLOW PREVENTOR

CHECK VALVE

METER-DUAL

■ METER-SINGLE

SERVICE-DUAL

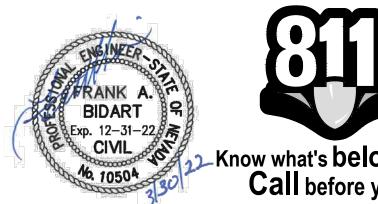
SERVICE−SINGLE

FLUSH VALVE ASSEMBLY HIGH DENSITY POLYETHYLENE

PL OR P/L

S

895 ROBERTA LANE, SUITE 104, SPARKS, NV 89431 (775) 359-3303 FAX (775) 359-3329 ENGINEERING



DESIGNER





SHEET NUMBER

____1 OF ___3

MATERIAL SPECIFICATIONS:

THESE MATERIAL SPECIFICATIONS SUPPLEMENT THE TECHNICAL SPECIFICATIONS, THE TRUCKEE MEADOWS WATER AUTHORITY ENGINEERING & CONSTRUCTION STANDARDS, AND THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION "ORANGE BOOK", LATEST EDITION. ANY DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE TMWA PROJECT REPRESENTATIVE FOR RESOLUTION.

DUCTILE IRON PIPE, C900 PVC PIPE, AND HIGH DENSITY POLYETHLENE <u>(HDPE) SERVICE LINE TUBING</u>

2.1 ALL PIPE MATERIALS AND APPURTENANCES SHALL BE PER THE TMWA ENGINEERING & CONSTRUCTION STANDARDS, UNLESS MODIFIED/AMENDED HEREIN. INSTALLATION, WORKMANSHIP, PRESSURE TESTING AT 150 PSI, AND DISINFECTION SHALL BE PER THE TMWA ENGINEERING & CONSTRUCTION STANDARDS.

2.2 ALL DUCTILE IRON PIPE SHALL BE CLASS 350 AND MEET THE REQUIREMENTS OF AWWA STANDARDS C151. C104 AND C111 WITH PRESSURE CLASS AS SPECIFIED IN THE IMPROVEMENT PLANS, STANDARD CEMENT LINING, BITUMINOUS COATING, AND SHALL BE NSF-61 CERTIFIED. ALL DUCTILE IRON PIPE SHALL BE POLYETHYLENE ENCASED PER AWWA C105. DUCTILE IRON PIPE SHALL BE EQUIPPED WITH TYTON TYPE BELL AND SPIGOT JOINTS. DUCTILE IRON PIPE SHALL BE TYTON JOINT DUCTILE IRON PIPE AS MANUFACTURED BY U.S. PIPE, GRIFFIN TYTON JOINT DUCTILE IRON PIPE AS MANUFACTURED BY GRIFFIN PIPE PRODUCTS CO., INC., OR

2.3 ALL C900 PVC WATER PIPE SHALL BE MANUFACTURED FROM NSF CERTIFIED COMPOUNDS CONFORMING TO ASTM D1784 WITH A CELL CLASSIFICATION OF 12454, AND SHALL BE NSF-61 CERTIFIED. C900 PVC WATER PIPE SHALL MEET ALL THE DIMENSIONAL, CHEMICAL, AND PHYSICAL REQUIREMENTS AS OUTLINED IN AWWA C900 AND WILL BE SUPPLIED IN 20 FOOT LAYING LENGTHS. JOINTS SHALL MEET THE REQUIREMENTS OF ASTM D3139 AND SHALL BE FORMED USING RIEBER TECHNOLOGY. GASKETS SHALL MEET THE REQUIREMENTS OF ASTM F477. C900 PVC WATER PIPE SHALL BE PRESSURE CLASS 235 (DR 18) PER AWWA C900. C900 PVC WATER PIPE SHALL BE AS MANUFACTURED BY DIAMOND PLASTICS CORPORATION, VINYLTECH PVC PIPE, NORTH AMERICAN PIPE CORPORATION, OR EQUAL. <u>NOTE — C900 PVC WATER PIPE MANUFACTURED BY JM EAGLE</u> <u>WILL NOT BE ACCEPTED BY TMWA FOR THIS PROJECT.</u>

2.4 ALL HIGH DENSITY POLYETHYLENE (HDPE) SERVICE LINE TUBING SHALL BE PRSSURE CLASS 200 (SDR 9) COPPER TUBING SIZE (CTS) PER AWWA C901, AND SHALL BE NSF-61 CERTIFIED.

POLYETHYLENE ENCASEMENT
POLYETHYLENE ENCASEMENT MATERIAL SHALL CONSIST OF 3 LAYERS OF CO-EXTRUDED LINEAR LOW DENSITY POLYETHYLENE (;;D[E), MINIMUM 8 MILS THICKNESS, MEETING REQUIREMENTS OF AWWA C105/A21.5. MATERIAL SHALL BE V-BIO ENHANCED POLYETHYLENE ENCASEMENT FOR DUCTILE

FITTINGS SHALL BE <u>DUCTILE IRON</u> AND MEET THE REQUIREMENTS OF AWWA STANDARDS C110/C153 AND C104 WITH END CONFIGURATIONS AS SPECIFIED IN THE IMPROVEMENT PLANS, AND SHALL BE NSF-61 CERTIFIED. ALL FITTINGS SHALL BE POLYETHYLENE ENCASED PER AWWA C105. FITTINGS SHALL BE ASPHALTIC COATED WITH CEMENT—MORTAR LINING PER AWWA C110/C153 AND C104. FOR FITTINGS WHERE CEMENT-MORTAR LININGS ARE NOT NORMALLY SUPPLIED, SUCH AS CAPS, PLUGS, AND SLEEVES, THE INSIDE OF THESE FITTINGS SHALL BE ASPHALTIC COATED PER AWWA C110/C153 CONFORMING TO ALL APPROPRIATE REQUIREMENTS FOR SEAL COAT PER AWWA C104.

GASKETS GASKETS SHALL BE FULL FACE TYPE WITH PROFILE BY ACIPCO (TORUSEAL), US PIPE (FLANGETYTE) OR APPROVED EQUAL. THE GASKET SHALL BE OF SUCH SIZE AND SHAPE TO PROVIDE AN ADEQUATE COMPRESSIVE FORCE AGAINST THE PLAIN END AND SOCKET AFTER ASSEMBLY TO AFFECT A POSITIVE SEAL UNDER ALL CONDITIONS OF JOINT AND GASKET TOLERANCES. THE SIZE, MOLD NUMBER, GASKET MANUFACTURE'S MARK, THE TRADEMARK OF THE JOINT, AND YEAR OF MANUFACTURER SHALL BE MOLDED ON THE GASKETS. MARKINGS SHALL NOT BE ON THE SEALING SURFACES. ONE GASKET SHALL BE FURNISHED WITH EACH LENGTH OF PIPE. LUBRICANT, WHERE REQUIRED, SHALL BE NONTOXIC, SHALL NOT SUPPORT THE GROWTH OF BACTERIA, AND SHALL HAVE NO DETERIORATION EFFECTS ON THE GASKET MATERIAL NOR SHALL IT IMPART TASTE OR ODOR TO WATER IN A PIPE. THE LUBRICANT SHALL BE DELIVERED TO THE SITE IN UNOPENED, SEALED CONTAINERS LABELED WITH THE TRADEMARK OR TRADE NAME AND THE PIPE MANUFACTURER'S

GATE VALVES FOR SIZES UP TO AND INCLUDING 12-INCHES SHALL MEET AWWA C509 OR C515, NON-RISING STEM, RESILIENT-SEALED VALVES WITH 2-INCH OPERATIONG NUT FOR BURIED SERVICE. VALVES MEETING THE AWWA C515 STANDARD SHALL HAVE A DUCTILE IRON BODY. VALVE ENDS SHALL BE AS SPECIFIED IN THE IMPROVEMENT PLANS. ALL GATE VALVES SHALL BE FUSION EPOXY LINED AND COATED, AND SHALL BE NSF-61 CERTIFIED. ALL VALVES SHALL BE POLYETHYLENE ENCASED PER AWWA C105. GATE VALVES UP TO AND INCLUDING 12-INCHES SHALL BE MUELLER

SERIES 45/65 RESILIENT WEDGE GATE VALVES, OR EQUAL.

7.1 <u>RESTRAINED JOINT PIPE AND RESTRAINED JOINT FITTI</u> ALL RESTRAINED JOINT PIPING SHALL BE DUCTILE IRON PIPE, UNLESS OTHERWISE SPECIFIED IN THE IMPROVEMENT PLANS. BELL AND SPIGOT PUSH-ON TYPE DUCTILE IRON TYTON JOINTS SHALL BE RESTRAINED USING SBR RUBBER GASKETS WITH STAINLESS STEEL LOCKING SEGMENTS VULCANIZED INTO THE RUBBER GASKETS, AND SHALL BE NSF-61 CERTIFIED. RESTRAINED JOINT RUBBER GASKETS SHALL BE FIELD LOK 350 GASKETS AS MANUFACTURED BY U.S. PIPE, PIRANHA RESTRAINING GASKET AS MANUFACTURED BY ROMAC INDUSTRIES OR EQUAL.

2361 SERIES RESILIENT WEDGE GATE VALVES, AMERICAN AVK COMPANY

7.2 <u>RESTRAINED JOINT FITTINGS SHALL BE MECHANICAL JOINT (MJ)</u> DUCTILE IRON WITH MECHANICAL JOINT WEDGE ACTION RESTRAINT GLANDS COMPATIBLE WITH ALL MECHANICAL JOINTS CONFORMING TO ANSI/AWWA C111/A21.11. GLAND BODY, WEDGES, AND WEDGE ACTUATING COMPONENTS SHALL BE CAST FROM GRADE 65-45-12 DUCTILE RON IN ACCORDANCE WITH ASTM A536. DUCTILE IRON GRIPPING WEDGES SHALL BE HEAT TREATED WITHIN A RANGE OF 370 TO 470 BHN. WEDGE ASSEMBLIES SHALL BE XYLAN FLURORPOLYMER COATED. CASTING BODIES SHALL BE COATED WITH A POLYESTER BASED POWDER TO PROVIDE CORROSION PROTECTION THAT IS ELECTROSTATIC APPLIED AND HEAT CURED. MECHANICAL JOINT WEDGE ACTION RESTRAINT GLANDS SHALL BE MEGALUG SERIES 1100 FOR DUCTILE IRON PIPE OR MEGALUG SERIES 2000PV FOR C900 PVC PIPE AS MANUFACTURED BY EBAA IRON, INC., STARGRIP SERIES 3000 WITH STARBOND COATING FOR COOO PVC PIPE AS MANUFACTURED BY STAR PIPE PRODUCTS, OR EQUAL.

FLANGE AND MECHANICAL JOINT T-HEAD BOLTS AND NUTS 8.1 FLANGE BOLTS AND NUTS: BOLTS AND NUTS SHALL BE CARBON STEEL WITH A MINIMUM 60,000 PSI TENSILE STRENGTH CONFORMING TO ASTM A307, GRADE A. BOLTS SHALL BE STANDARD ANSI B1.1, CLASS 2A COARSE THREADS. NUTS SHALL CONFORM TO ASTM A563 AND BE STANDARD ANSI B1.1, CLASS 2A COARSE THREADS. ALL BOLT HEADS AND NUTS SHALL BE HEXAGONAL. IDENTIFICATION ON THE HEAD OF THE BOLT

8.2 <u>MECHANICAL JOINT T-HEAD BOLTS AND NUTS:</u> BOLTS SHALL BE ASTM A242 WEATHERING STEEL WITH A MINIMUM YIELD STRENGTH OF 45,000 PSI. ALL T-HEAD BOLTS AND NUTS SHALL BE THREADED IN ACCORDANCE WITH ANSI B1.1, CLASS 2A COARSE THREADS. <u>HEAVY HEX NUTS SHALL BE</u> <u>USED.</u> BOLT HEADS SHALL BE IN ACCORDANCE WITH THE DIMENSIONS OF ANSI/AWWA C111/A21.11-95.

8.3 <u>FINISH:</u> ALL FLANGE BOLTS AND NUTS AND MECHANICAL JOINT T—HEAD BOLTS AND NUTS SHALL BE FINISHED WITH THE TRIPAC 2000 BLUE COATING SYSTEM TO SIGNIFICANTLY REDUCE THE EFFECTS OF CORROSION OR EQUAL. A MULTI-STEP PROCESS SHALL BE UTILIZED TO CHEMICALLY CLEAN, ABRASIVE BLAST, AND PRIME WITH ZINC/NICKEL PHOSPHATE PRIMER PRIOR TO APPLICATION OF THE XYLAN FLUOROPOLYMER. WEAT RESISTANCE (K-FACTOR) SHALL BE IN THE RANGE OF 6 TO 8 (EXCELLENT) AND MINIMAL EFFECTS SHOULD BE SEEN AFTER A 3,000 HOUR SALT SPRAY TEST CONFORMING TO ASTM B-117. BOLTS AND NUTS FINISHED WITH THE TRIPAC 2000 BLUE COATING SYSTEM DO NOT REQUIRE COATING WITH MASTIC.

<u>PIPE COUPLINGS</u>

SMITH-BLAIR, INC., OR EQUAL.

PIPE COUPLINGS SHALL MEET THE REQUIREMENTS OF AWWA C219. SLEEVE MATERIAL SHALL BE CARBON STEEL OR DUCTILE IRON WITH NSF-61 REGISTERED FUSION-BONDED EPOXY COATING. BOLTS AND NUTS FOR BURIED SERVICE APPLICATIONS SHALL BE 304 STAINLESS STEEL. COUPLINGS SHALL BE DESIGNED SPECIFICALLY FOR THE PIPE MATERIAL/SIZE AND APPLICATION. COUPLINGS SHALL INSTALL WITH A MAXIMUM OF ONE BOLT AT EACH END. PIPE COUPLINGS SHALL BE HYMAX COUPLINGS AS MANUFACTURED BY KRAUSZ USA., ROMAC MACRO HP TOW—BOLT WIDE RANGE DUCTILE IRON COUPLING AS MANUFACTURED BY ROMAC INDUSTRIES, INC., OR EQUAL. AT CONNECTIONS TO EXISTING METAL PIPE, INSULATED TRANSITION COUPLING SHALL BE USED FOR CATHODIC

FLANGED COUPLING ADAPTERS
FLANGED COUPLING ADAPTERS SHALL MEET THE REQUIREMENTS OF AWWA C219 WITH AWWA C207 CLASS D ANSI 150 LB DRILLING FLANGE. SLEEVE MATERIAL SHALL BE CARBON STEEL WITH NSF-61 REGISTERED FUSION-BONDED EPOXY COATING. BOLTS AND NUTS FOR BURIED SERVICE APPLICATIONS SHALL BE ANSI 304-303 STAINLESS STEEL. FLANGED COUPLING ADAPTERS SHALL BE DESIGNED SPECIFICALLY FOR THE PIPE MATERIAL, SIZE AND APPLICATION AND SHALL INSTALL WITH A MAXIMUM OF ONE BOLT ON THE COMPRESSION END. FLANGED COUPLING ADAPTERS SHALL BE HYMAX FLANGED ADAPTERS AS MANUFACTURED BY KRAUSZ USA, 921 TOP BOLT FLANGED COUPLING ADAPTERS AS MANUFACTURED BY

<u>SERVICE SADDLES</u> SERVICE SADDLE BODY SHALL BE CAST FROM DUCTILE IRON MEETING OR EXCEEDING ASTM A536, WITH A FUSION BONDED NYLON COATING, OR COATED WITH AN IMPACT AND CORROSION RESISTANT FUSION BONDED EPOXY, MIN. 10-12 MILS THICK, AND EQUIPPED WITH DOUBLE TYPE 304 STAINLESS STEEL STRAPS. SERVICE SADDLES SHALL HAVE A NPT THREADED INLET. FOR INSTALLATIONS ON C900 PVC PIPE, MAXIMUM O.D. OF SERVICE SADDLE'S O.D. RANGE SHALL BE EQUIVALENT TO THE O.D. OF THE C900 PVC PIPE FOR WHICH IT WILL BE INSTALLED. SERVICE SADDLES SHALL BE SMITH-BLAIR, INC., OR ROMAC STYLE 202NS AS MANUFACTURED BY ROMAC INDUSTRIES, INC., OR EQUAL.

CORPORATION STOPS FOR SERVICE CONNECTIONS
CORPORATION STOPS SHALL BE BALL VALVE, BRASS CONFORMING TO AWWA C800 AND ASTM B-62, AND SUITABLE FOR A WORKING PRESSURE OF 300 PSI. ALL BRASS THAT CONTACTS POTABLE WATER SHALL BE LEAD FREE CONFORMING TO AWWA C800 AND NSF-61 CERTIFIED. CORPORATION STOPS SHALL HAVE THE LETTERS "NL" OR SIMILAR CAST INTO THE MAIN BODY FOR PROPER LEAD FREE IDENTIFICATION. INLET END SHALL BE MALE IRON PIPE THREAD (MIP). OUTLET END SHALL BE COMPRESSION CONNECTION SUITABLE FOR CONNECTION TO CTS O.D. HDPE TUBING, SIZE AS SPECIFIED IN THE IMPROVEMENT PLANS. A TYPE 304 STAINLESS STEEL INSERT STIFFENER SHALL BE USED WHEN CONNECTING TO PE TUBING. CORPORATION STOPS FOR SERVICE CONNECTIONS SHALL BE FORD BALLCORP CORPORATION STOPS WITH QUICK JOINT COMPRSSION CONNECTION OUTLET MODEL #FB1100-X-Q-NL AS MANUFACTURED BY THE FORD METER BOX COMPANY, INC., MUELLER 300 BALL CORPORTATION VALVES WITH MUELLER 110 CONDUCTIVE COMPRESSION CONNECTION

OUTLET MODEL # B-25028N, OR EQUAL.

13. <u>CORPORATION STOPS FOR 2-INCH TEMPORARY FLUSHING AND TESTING</u> <u>ASSEMBLIES</u> CORPORATION STOPS SHALL BE BALL VALVE, BRASS CONFORMING TO AWWA C800 AND ASTM B-62, AND SUITABLE FOR A WORKING PRESSURE OF 300 PSI. INLET END SHALL BE MALE IRON PIPE THREAD (MIP). OUTLET END SHALL BE MALE IRON PIPE THREAD (MIP). CORPORATION STOPS FOR 2-INCH TEMPORARY FLUSHING AND TESTING ASSEMBLIES SHALL BE FORD BALLCORP CORPORATION STOPS MODEL # FB500-7 AS MANUFACTURED BY THE FORD METER BOX COMPANY, INC., MUELLER 300 BALL TYPE CORPORATION VALVES MODEL # B-2969, OR EQUAL.

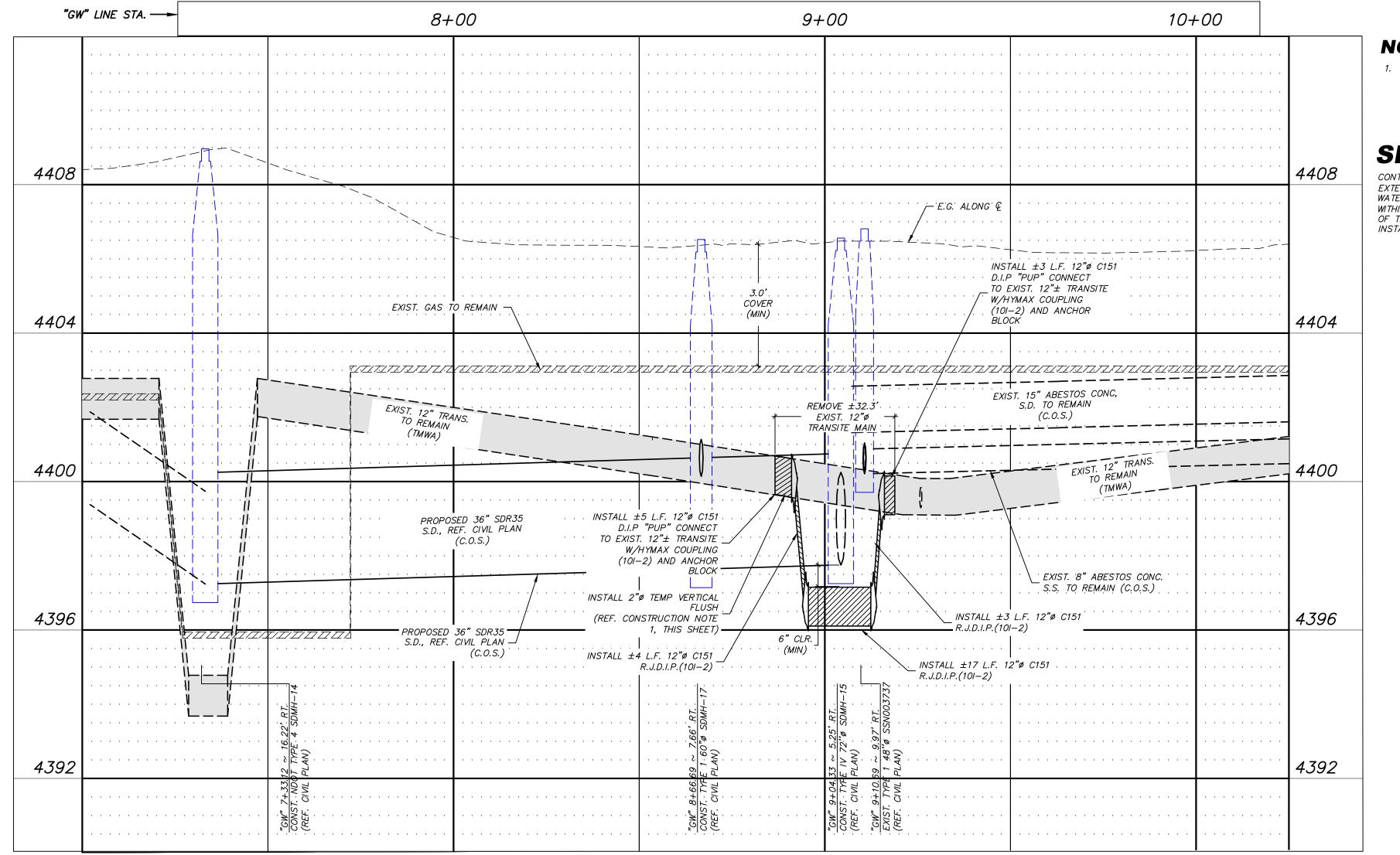
COMPRESSION COUPLINGS AND ADAPTERS FOR SERVICE LINE CONNECTIONS
ALL BRASS THAT CONTACTS POTABLE WATER SHALL BE LEAD FREE CONFORMING TO AWWA C800 AND NSF-61 CERTIFIED. COMPRESSION COUPLINGS AND ADAPTERS SHALL HAVE THE LETTERS "NL" OR SIMILAR CAST INTO THE MAIN BODY FOR PROPER LEAD FREE IDENTIFICATION. A TYPE 304 STAINLESS STEEL INSERT STIFFENER SHALL BE USED WHEN CONNECTING TO PE TUBING. COMPRESSION COUPLINGS AND ADAPTERS FOR CONNECTING NEW CTS PE SERVICE LINES TO EXISTING COPPER SERVICE LINES OR METER SETTERS SHALL BE FORD QUICK JOINT COUPLINGS, MUELLER 110 COMPRESSION CONNECTIONS, OR EQUAL.

INCIDENTAL ITEMS
THE CONTRACTOR SHALL FURNISH ALL INCIDENTAL ITEMS REQUIRED TO COMPLETE THE WORK THAT ARE NOT SPECIFICALLY REFERRED TO HEREIN. INCIDENTAL ITEMS, WHICH SHALL BE FURNISHED BY THE CONTRACTOR INCLUDE. BUT ARE NOT LIMITED TO: THRUST BLOCKS. VALVE BOXES. TRACER STATION BOXES, CONDUCTOR PIPES, TRACER WIRE, WARNING TAPE, FLANGE GASKETS, BOLTS, NUTS, PIPE COATINGS, CORROSION PROTECTION,

CHLORINE DOSAGE NUMBER OF 5 gram CALCIUM HYPOCHLORITE

TABLETS REQUIRED FOR DOSE OF 25mg/L PIPE DIAMETER LENGTH OF PIPE SECTION <u>INCHES</u> 13 OR LESS 18 20 4

GOLDY WAY (PUBLIC) STA. "GW" 7+00 TO 10+50

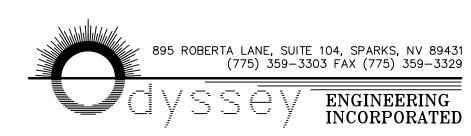


NOTES

1. INSTALL 2"Ø TEMP VERTICAL FLUSH
1 — INSTALL 12" X 2" SERVICE SADDLE
1 — INSTALL 2"Ø CORP STOP
CONTRACTOR TO FURNISH PIPE TO GRADE
AS REQUIRED. RETIRE FLUSH WITH 2"Ø BRASS
CAP ONCE TESTING HAS BEEN COMPLETED.

SLURRY BACKFILL NOTE

CONTRACTOR SHALL INSTALL EXCAVATABLE SLURRY BACKFILL
EXTENDING 10' UP AND DOWN STREAM OF PROPOSED
WATER MAIN CROSSING. EXCAVATABLE SLURRY SHALL BE INSTALLED
WITHIN THE UPPER PIPE ZONE OF 12" WATER MAIN TO SPRING LINE
OF THE PROPOSED STORM DRAIN AND SANITARY SEWER
INSTALLATIONS



DESIGNER



RUCKEE MEADOWS W.

A U T H O R I
1355 CAPITAL BLVD. / PO BOX 300
RENO, NEVADA 89502-3013
PH 775-834-8000 / FX 775-834-

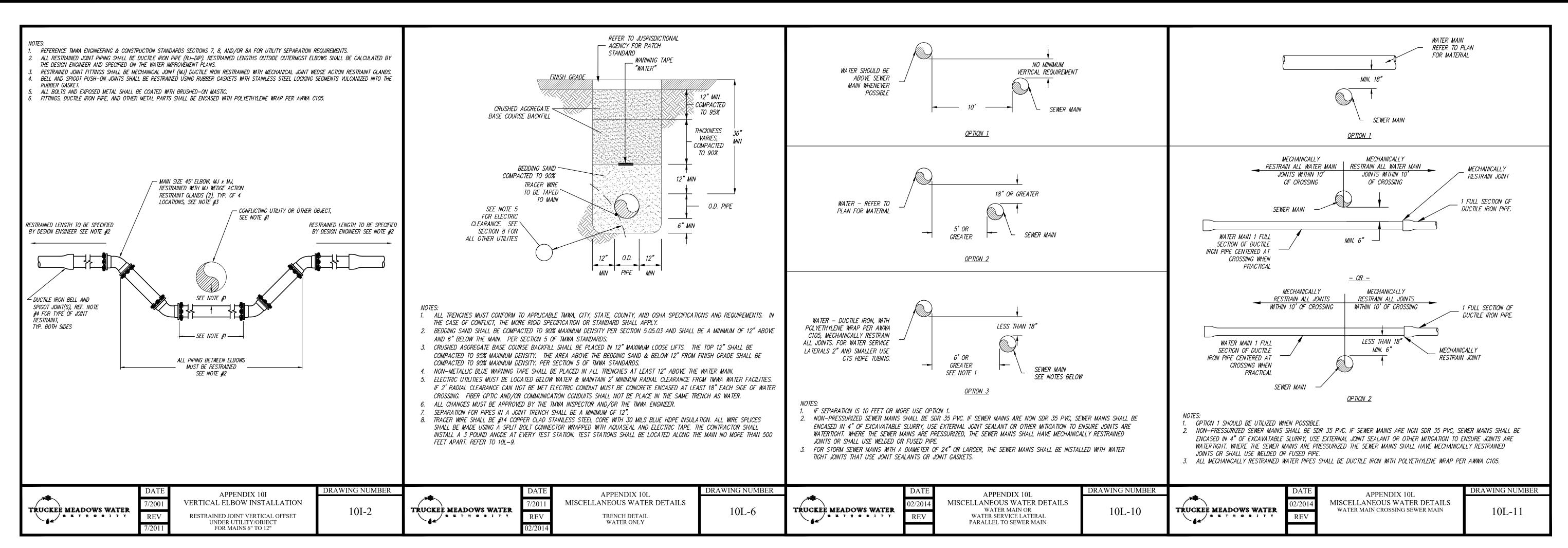
GOLDY WAY MI

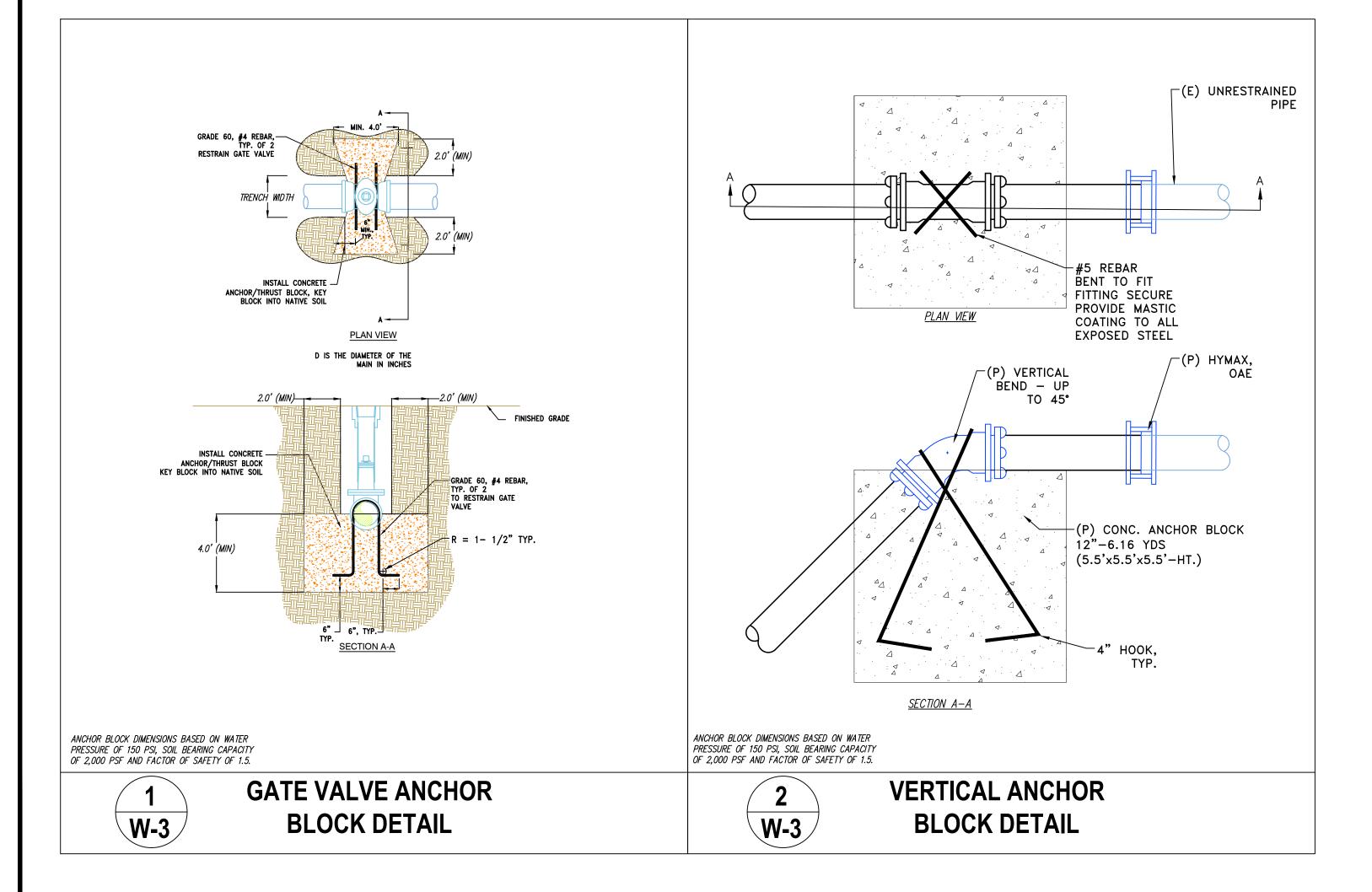
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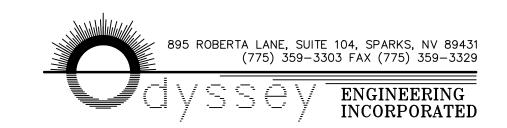
SHEET NUMBER

W-2

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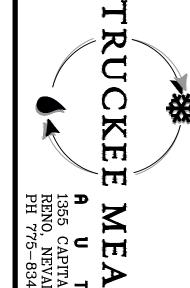






DESIGNER





KEE MEADOWS WATE:

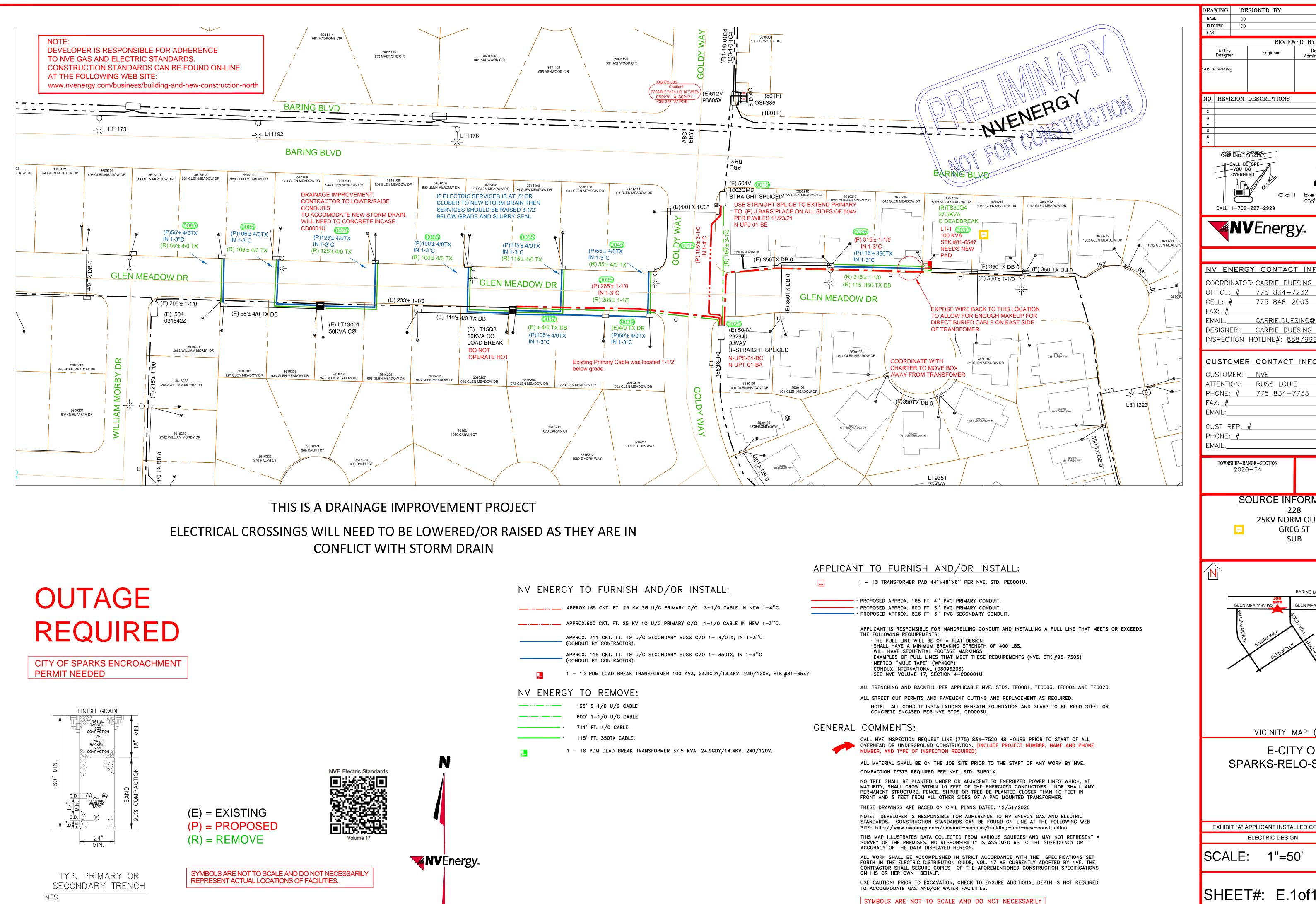
A U I H O R I I Y

1355 CAPITAL BLVD. / PO BOX 30013
RENO, NEVADA 89502-3013
PH 775-834-8000 / FX 775-834-8003

GOLDY WAY MAIN L

SHEET NUMBER

W-3_3_0F_3_



REPRESENT ACTUAL LOCATIONS OF FACILITIES.

DRAWING DESIGNED BY 11/17/21 11/17/21 REVIEWED BY: Administrator NO. REVISION DESCRIPTIONS DATE I AVOID HITTING OVERHEAD POWER LINES. IT'S COSTLY. before you Dig CALL 1-702-227-2929 **NV**Energy_™ P.O. Box 10100 Reno, NV. 89520-0024 NV ENERGY CONTACT INFORMATION: COORDINATOR: CARRIE DUESING 775 834-7232 <u>775 846-2003</u> CARRIE.DUESING@NVENERGY.COM DESIGNER: <u>CARRIE DUESING</u> INSPECTION HOTLINE#: <u>888/999—1556</u> CUSTOMER CONTACT INFORMATION: CUSTOMER: <u>NVE</u> ATTENTION:<u>RUSS LOUIE</u> PHONE: # 775 834-7733 TOWNSHIP-RANGE-SECTION APN# SOURCE INFORMATION: 25KV NORM OUT OF **GREG ST** BARING BLVD GLEN MEADOW DR GLEN MEADOW DR VICINITY MAP (NTS) E-CITY OF SPARKS-RELO-S&H-NVE EXHIBIT "A" APPLICANT INSTALLED CONDUIT **ELECTRIC DESIGN** 1"=50'