

CITY OF SPARKS

MARY WAHL STORM DRAIN RECONSTRUCTION PROJECT

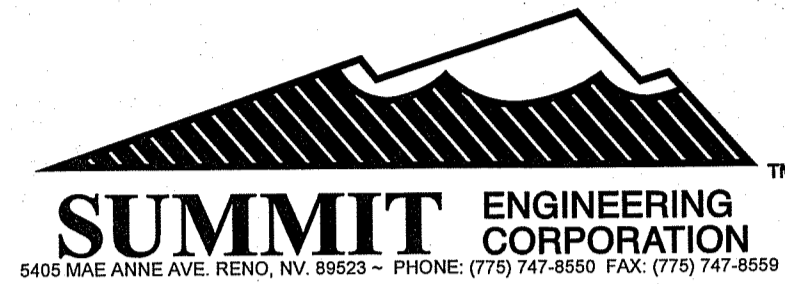
BID NO. 14/15-004 NEVADA PWP# WA-2014-291

SPARKS WASHOE COUNTY NEVADA



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ENGINEER:



ABBREVIATIONS:

±	APPROXIMATE	MH	MANHOLE
AC	ASPHALTIC CONCRETE	P	PAD ELEVATION
ACP	ASBESTOS CEMENT PIPE	PB	PULL BOX
BC	BEGIN CURVE	PCC	PORTLAND CEMENT CONCRETE
BS	BACK OF SIDEWALK	PI	POINT OF INTERSECTION
BVC	BEGIN VERTICAL CURVE	PL	PROPERTY LINE
CAP	CAPACITY	PM	PARCEL MAP
CB	CATCH BASIN	POT	POINT OF TANGENT
CH	CHORD	PRC	POINT OF REVERSE CURVATURE
CL	CENTERLINE	PS	PARKING SPACE
CMP	CORRUGATED METAL PIPE	PUE	PUBLIC UTILITY EASEMENT
CONC	CONCRETE	PVC	POLYVINYL CHLORIDE PIPE
CONST	CONSTRUCT	Q	VOLUMETRIC FLOW RATE
CP	CONCRETE PIPE	(R)	RADIAL
CR	CURB RETURN	R	RADIUS
DET	DETAIL	RCB	REINFORCED CONCRETE BOX
Ø	INSIDE DIAMETER	RCP	REINFORCED CONCRETE PIPE
DI	DROP INLET	REF	REFERENCE
DWY	DRIVEWAY	RET	CURB RETURN
E	ELECTRICAL	REQ	REQUIRED
EC	END OF CURVE	RT	RIGHT
EG	EXISTING GRADE	R/W	RIGHT OF WAY
ELEV	ELEVATION	S	SLOPE
EVC	END OF VERTICAL CURVE	SD	STORM DRAIN
(E)	EXISTING	SDMH	STORM DRAIN MANHOLE
EX	EXISTING	SHT	SHEET
EXIST	EXISTING	SS	SANITARY SEWER
FES	FLARED END SECTION	STA	STATION
FF	FINISHED FLOOR	SUB	SUB-BASIN
FFC	FRONT FACE OF CURB	SW	SIDEWALK
FG	FINISHED GRADE	T	TANGENT
FH	FIRE HYDRANT	TEL	TELEPHONE
FL	FLOW LINE	TBC	TOP BACK OF CURB
G	GAS	TC	TOP OF CURB
GB	GRADE BREAK	TP	TEST PIT
HORIZ	HORIZONTAL	TYP	TYPICAL
HPS	HANDICAP SPACE	VC	VERTICAL CURVE
HS	HOUSE SERVICE	VG	VALLEY GUTTER
IE	INVERT ELEVATION	VERT	VERTICAL
INT	INTERSECTION	VPI	VERTICAL POINT OF INTERSECTION
L	LENGTH	W	WATER
LF	LINEAL FEET	W/	WITH
LIP	LIP OF GUTTER		
LT	LEFT		

LEGEND

---x---	EX. FENCE LINE	○	EX. POWER POLE
---w---	EX. WATERLINE	●	MANHOLE (HOLLOW IF EXISTING)
---rrr---	EX. IRRIGATION LINE	▭	SIGNAL LOOP DETECTORS
---g---	EX. GAS LINE	•	EX. SIGN
---ss---	EX. SANITARY SEWER LINE	•	PROP. SIGN
---sd---	EX. STORM DRAIN LINE	▭	CONCRETE REMOVAL / PLACEMENT
---oc---	EX. OVER HEAD POWER LINE	⊙	SURVEY MONUMENT
---e---	EX. UNDER GROUND ELECTRIC	•	CITY OF RENO BENCHMARK
---foc---	EX. FIBER OPTICS LINE	▭	EX. UTILITY VAULT
---	EX. R/W AND PROPERTY LINE	○	EX. FIRE HYDRANT
---	PROP. STORM DRAIN LINE	○	EX. LIGHT POLE
////	SAW CUT / LIMITS	○	EX. GRADE
○	UTILITY VALVE (WATER AND GAS)	○	PROP. GRADE
⊗	EX. CATCH BASIN / DROP INLET	(1.00%)	EX. SLOPE
▭	PROP. CATCH BASIN	1.00%	PROP. SLOPE

OWNER:



CITY OF SPARKS
431 PRATER WAY
SPARKS, NV 89431
PHONE: (775) 353-2300

SHEET INDEX

T-1	TITLE SHEET
K-1	KEY SHEET
P-1	MARY WAHL ~ STA 1+00 TO 6+00
P-2	MARY WAHL ~ STA 6+00 TO 9+41
D-1	DETAIL SHEET
D-2	DETAIL SHEET

BASIS OF BEARINGS

NORTH AMERICAN DATUM OF 1983 AS BASED ON FEDERAL BASE NETWORK/COOPERATIVE BASE NETWORK OBSERVATIONS IN 1994 (AKA NAD83/94), NEVADA STATE PLANE WEST ZONE AS DETERMINED WITH REAL TIME KINEMATIC (RTK) GPS OBSERVATIONS MADE MAY 11, 2009 WITH CORRECTIONS TRANSMITTED BY WASHOE COUNTY CONTINUOUSLY OPERATING REFERENCE STATION (CORS) RENO NORTHWEST (RNO1). GROUND COORDINATES HEREON REFLECT GRID COORDINATES MULTIPLIED BY A COMBINED GRID TO GROUND FACTOR OF 1.000197939.

BASIS OF ELEVATIONS

CITY OF SPARKS BENCHMARK #19 TAKEN AS THE PUBLISHED NAVD88 ELEVATION OF 4407.89 FEET.

SPECIFICATIONS

ALL CONSTRUCTION SHALL CONFORM TO THE LATEST EDITION OF THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (AND ANY APPURTENANT SUPPLEMENTS), SPONSORED AND DISTRIBUTED BY RENO, SPARKS, AND WASHOE COUNTY, AND THE SPECIAL PROVISIONS, GENERAL CONDITIONS, TECHNICAL SPECIFICATIONS, AND OTHER CONTRACT DOCUMENTS.

APPROVALS

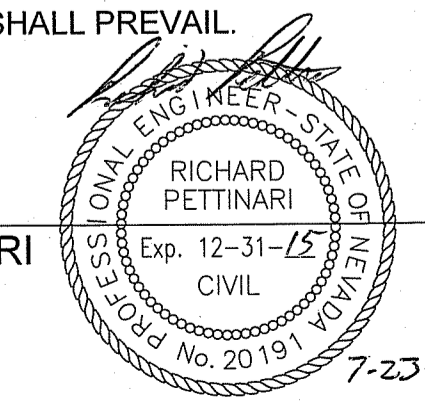
NEIL C. KRUTZ, P.E.
DEPUTY CITY MANAGER

ANDREW M. HUMMEL, P.E.
UTILITY MANAGER

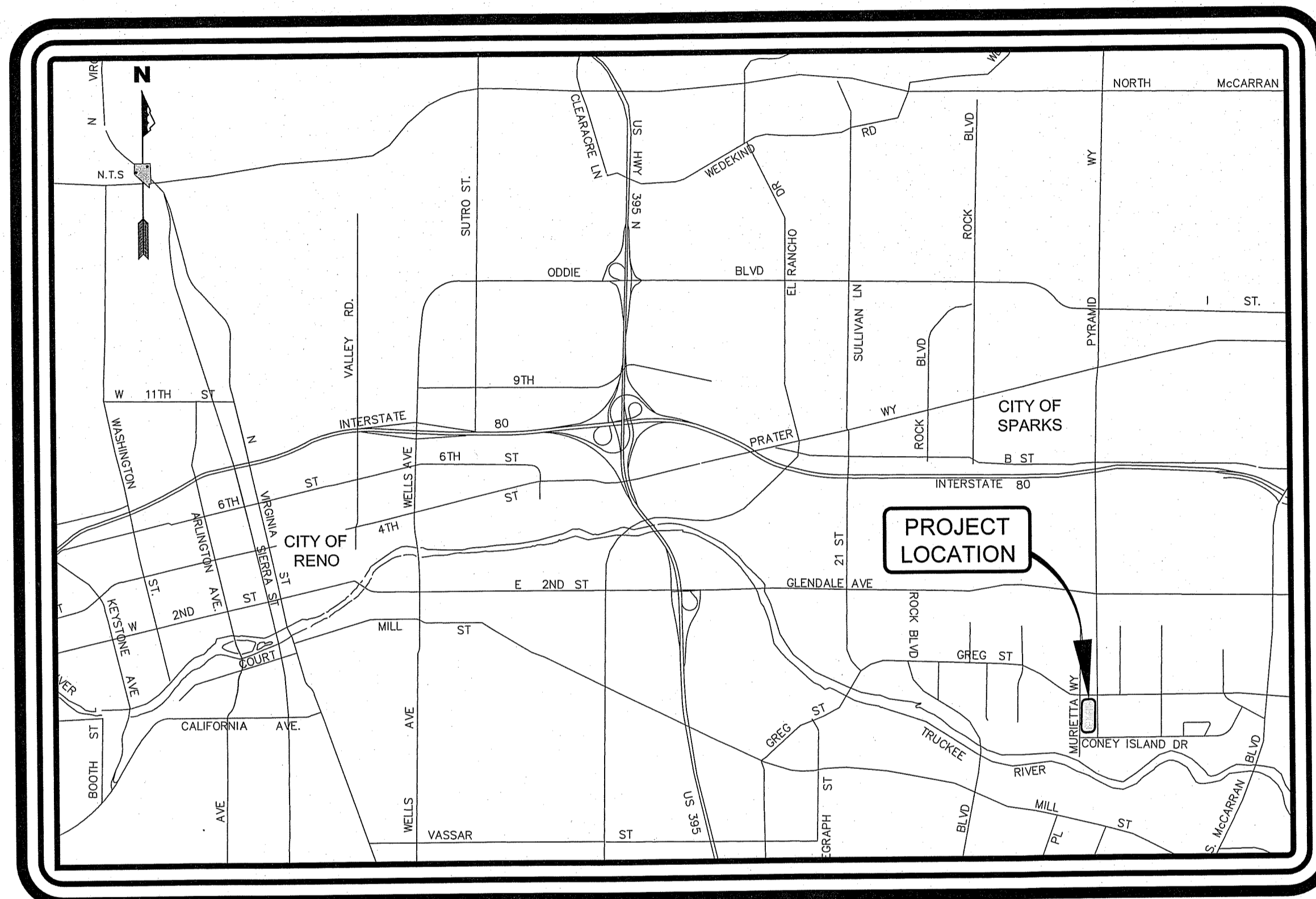
ENGINEER'S STATEMENT

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

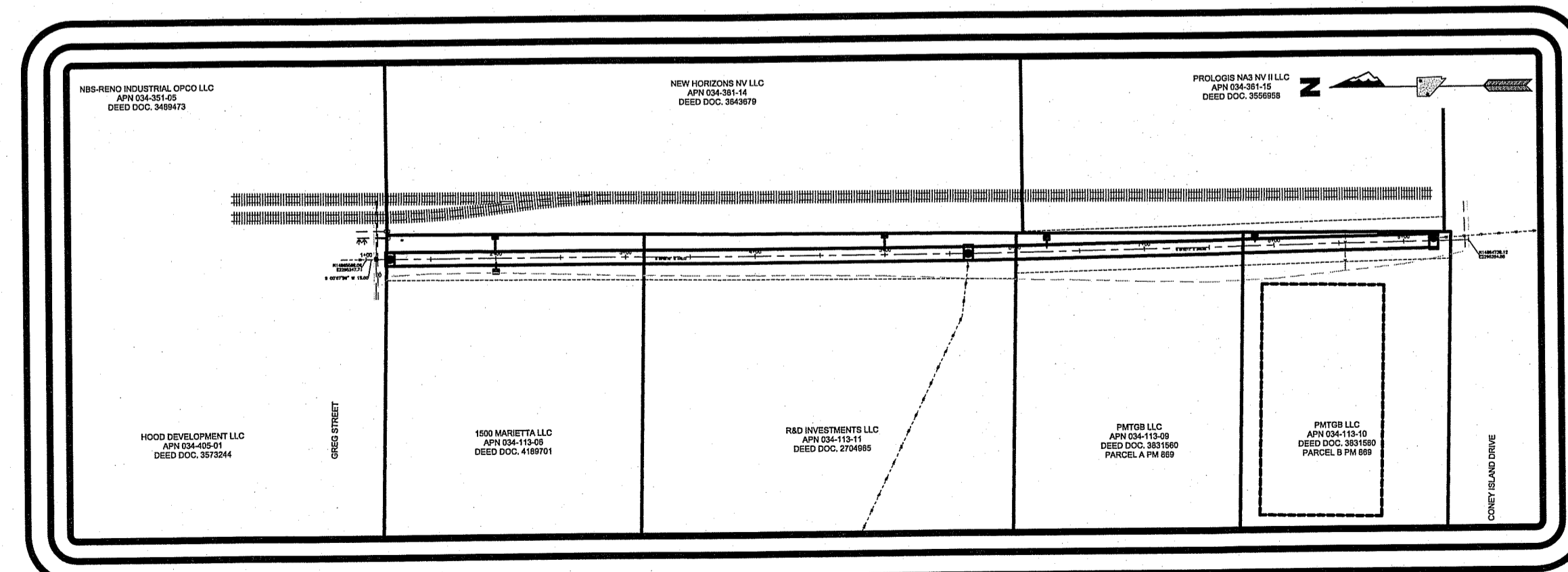
RICHARD D. PETTINARI



P.E. #20191



VICINITY MAP
N.T.S



SITE MAP
(SCALE: 1"=200')

REV.	DATE	DESCRIPTION	BY	APP'D

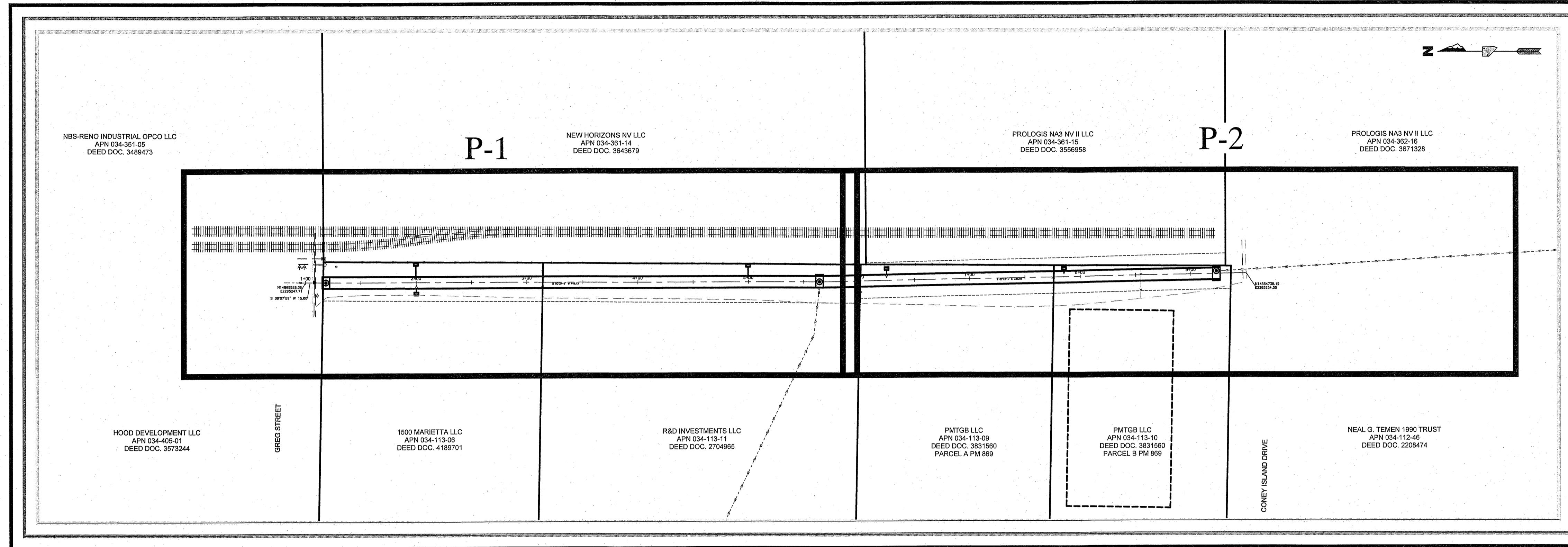
CITY OF SPARKS
 MARY WAHL STORM DRAIN PROJECT
 TITLE SHEET
 WASHOE COUNTY
 SPARKS
 NEVADA

DESIGNED BY:	C.B.
CHECKED BY:	R.P.
SCALE	
HORIZ:	1"=200'
VERT:	N/A
JOB NO:	29711

SHEET	T-1	OF	6
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CITY OF SPARKS MARY WAHL STORM DRAIN PROJECT



SWPPP NOTES

STANDARD NOTE No. 1
THE CONTRACTOR AND/OR THEIR AUTHORIZED AGENTS SHALL EACH DAY REMOVE ALL SEDIMENT, MUD, CONSTRUCTION DEBRIS, OR OTHER POTENTIAL POLLUTANTS THAT MAY HAVE BEEN DISCHARGED TO, OR ACCUMULATED IN, THE PUBLIC RIGHTS OF WAYS AS A RESULT OF CONSTRUCTION ACTIVITIES ASSOCIATED WITH THIS SITE DEVELOPMENT OR CONSTRUCTION PROJECT. SUCH MATERIALS SHALL BE PREVENTED FROM ENTERING THE STORM SEWER SYSTEM.

STANDARD NOTE No. 2
ADDITIONAL CONSTRUCTION SITE DISCHARGE BEST MANAGEMENT PRACTICES MAY BE REQUIRED OF THE CONTRACTOR AND HIS OR HER AGENTS DUE TO UNFORESEEN EROSION PROBLEMS OR IF THE SUBMITTED PLAN DOES NOT MEET THE PERFORMANCE STANDARDS SPECIFIED IN THE TRUCKEE MEADOWS CONSTRUCTION SITE BEST MANAGEMENT PRACTICES HANDBOOK.

STANDARD NOTE No. 3
TEMPORARY OR PERMANENT STABILIZATION PRACTICES WILL BE INSTALLED ON DISTURBED AREAS AS SOON AS PRACTICABLE AND NO LATER THAN 14 DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS TEMPORARILY OR PERMANENTLY CEASED. SOME EXCEPTIONS MAY APPLY; REFER TO STORM WATER GENERAL PERMIT NVR100000, SECTION 1.B.1.b.(2).

STANDARD NOTE No. 4
AT A MINIMUM, THE CONTRACTOR OR HIS AGENT SHALL INSPECT ALL DISTURBED AREAS, AREAS USED FOR STORAGE OF MATERIALS AND EQUIPMENT THAT AREA EXPOSED TO PRECIPITATION, VEHICLE

ENTRANCE AND EXIT LOCATIONS AND ALL BMPs WEEKLY, PRIOR TO A FORECASTED RAIN EVENT AND WITHIN 24 HOURS AFTER ANY ACTUAL RAIN EVENT. THE CONTRACTOR OR HIS AGENT SHALL UPDATE OR MODIFY THE STORM WATER POLLUTION PREVENTION PLAN AS NECESSARY. SOME EXCEPTIONS TO WEEKLY INSPECTIONS MAY APPLY, SUCH AS FROZEN GROUND CONDITIONS OR SUSPENSION OF LAND DISTURBANCE ACTIVITIES. REFER TO STORM WATER GENERAL PERMIT NVR100000, SECTION 1.B.1.g.

STANDARD NOTE No. 5
ACCUMULATED SEDIMENT IN BMPs SHALL BE REMOVED WITHIN SEVEN DAYS AFTER A STORMWATER RUNOFF EVENT OR PRIOR TO THE NEXT ANTICIPATED STORM EVENT WHICHEVER IS EARLIER. SEDIMENT MUST BE REMOVED WHEN BMP DESIGN CAPACITY HAS BEEN REDUCED BY 50 PERCENT OR MORE.

- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DEWATERING OPERATIONS, IF REQUIRED, INCLUDING EXPLORATION, DESIGN, ENGINEERING, PERMITTING, INSTALLATION, OPERATION AND CLOSURE METHODS AND OPERATION SHALL BE SUBJECT TO THE ENGINEER'S APPROVAL AND ANY CONDITIONS OR REVIEWING AND PERMITTING AGENCIES.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL NECESSARY EXCAVATION SUPPORT SYSTEMS INCLUDING SHORING. SHORING DESIGN SHALL BE PREPARED BY A NEVADA P.E. AND SHALL BE SUBJECT TO REVIEW AND APPROVAL BY THE ENGINEER.
- SHOULD ANY PREHISTORIC OR HISTORIC REMAINS/ARTIFACTS BE DISCOVERED DURING SITE DEVELOPMENT, WORK SHALL TEMPORARILY BE HALTED AT THE SPECIFIC SITE AND THE STATE HISTORIC PRESERVATION OFFICE OF THE DEPARTMENT OF MUSEUMS, LIBRARY, AND ARTS, SHALL BE NOTIFIED TO RECORD AND PHOTOGRAPH THE SITE. THE PERIOD OF TEMPORARY DELAY SHALL BE LIMITED TO A MAXIMUM OF TWO (2) WORKING DAYS FROM THE DATE OF NOTIFICATION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO EXISTING ROADS, BUILDINGS, OR OTHER STRUCTURES RESULTING FROM OR THROUGH THE CONSTRUCTION ACTIVITIES. REPAIRS SHALL BE MADE TO THE SATISFACTION OF THE APPROPRIATE AGENCY AND AT NO COST TO THE OWNER. THE CONTRACTOR IS ALSO RESPONSIBLE FOR REPAIRS TO EXISTING LANDSCAPING OR SPECIAL HARDSCAPE FEATURES

- (I.E., STAMPED CONCRETE, BRICK, DURASTONE ETC.) DAMAGED BY OR THROUGH CONSTRUCTION ACTIVITIES. REPAIRS SHALL BE MADE TO THE SATISFACTION OF THE DESIGN ENGINEER. THE CONTRACTOR SHALL CONFINE HIS ACTIVITIES TO WITHIN THE LIMITS OF CONSTRUCTION. ALL AREAS DISTURBED BY THE CONTRACTOR OR THROUGH HIS CONSTRUCTION ACTIVITIES SHALL BE RESTORED TO THEIR NATURAL OR BETTER CONDITION. THE CONTRACTOR SHALL RECEIVE NO PAYMENT FOR SUCH RESTORATION.
- THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE DESIGN ENGINEER OF DISCREPANCIES BETWEEN THE INFORMATION SHOWN ON THESE DRAWINGS AND THE CONDITIONS EXISTING IN THE FIELD. ANYTHING MENTIONED IN THE SPECIFICATIONS AND NOT SHOWN ON THESE DRAWINGS, OR SHOWN ON THE DRAWINGS AND NOT MENTIONED IN THE SPECIFICATIONS SHALL BE OF LIKE EFFECT AS IF SHOWN OR MENTIONED IN BOTH. IF THE CONTRACTOR FAILS TO NOTIFY THE DESIGN ENGINEER IN A TIMELY MANNER OF ANY APPARENT ERROR OR OMISSION ON THE PLANS OR IN THE SPECIFICATIONS, THE CONTRACTOR WILL BE RESPONSIBLE FOR CORRECTING WORK INCORRECTLY DONE AT THE CONTRACTOR'S EXPENSE.
- ALL CONSTRUCTION MATERIALS AND PRACTICES SHALL CONFORM TO THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (LATEST EDITION THROUGH 2007 UPDATES), STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION, SPECIAL PROVISIONS AND THESE PLANS AND SPECIFICATIONS, AND ALL SAFETY

GENERAL NOTES

- REGULATIONS AND CODES PERTINENT TO THE PROJECT CONSTRUCTION.
- PAYMENT FOR WORK SHOWN ON THESE PLANS EITHER SPECIFIED OR IMPLIED, BUT NOT INCLUDED IN THE BID PROPOSAL SHALL BE CONSIDERED AS INCLUDED IN THE PRICE PAID FOR OTHER ITEMS OF WORK.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT ALL MANHOLE RIMS AND ANY EXISTING UTILITY COVERS WITHIN THE CONSTRUCTION LIMITS ARE SET IN ACCORDANCE WITH MANHOLE COLLAR, UTILITY VALVE, AND SURVEY MONUMENT DETAILS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING WATER FOR HIS NEEDS, AS WELL AS STAGING AREA LOCATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR JOB SITE SECURITY FOR MATERIALS, SUPPLIES, EQUIPMENT, ETC., THROUGHOUT THE DURATION OF THE CONTRACT. ALL MATERIALS, WHETHER IN TRANSIT, STORED ON SITE OR INSTALLED AWAITING FINAL ACCEPTANCE ARE THE PROPERTY OF THE CONTRACTOR. ALL LOSS OR DAMAGE TO THE MATERIALS, UNTIL ACCEPTANCE, IS THE RESPONSIBILITY OF THE CONTRACTOR AND MUST BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE.
- THE LOCATION OF EXISTING UTILITIES SHOWN ON THESE PLANS ARE APPROXIMATE ONLY AND INDICATE GENERALLY THEIR LOCATION ACCORDING TO THE BEST KNOWLEDGE OF THE DESIGN ENGINEER. THE CONTRACTOR SHALL NOTIFY UTILITY COMPANIES NOT LESS THAN FIVE WORKING DAYS PRIOR TO THE

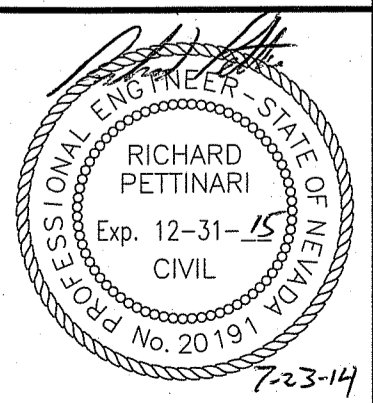
- START OF CONSTRUCTION TO VERIFY THE LOCATION AND DEPTHS OF UTILITIES. THE CONTRACTOR SHALL CALL UNDERGROUND SERVICES ALERT AT 1-800-227-2600 PRIOR TO COMMENCING ANY EXCAVATION ACTIVITIES FOR UTILITY LOCATION. ANY DAMAGE TO UTILITIES CAUSED BY OPERATIONS OF THE CONTRACTOR SHALL BE REPAIRED BY THE CONTRACTOR AT NO COST TO THE OWNER. THE CONTRACTOR SHALL SUBMIT TO THE DESIGN ENGINEER, A LIST OF UTILITY APPURTENANCES ENCOUNTERED DURING CONSTRUCTION INDICATING STATION AND OFFSET.
- SUBSURFACE UTILITIES ARE DEPICTED BY THEIR QUALITY LEVELS IN ACCORDANCE AMERICAN SOCIETY OF CIVIL ENGINEERS STANDARD GUIDELINES FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATE (CIASCE 38-02). ALL UTILITY INFORMATION SHOWN HEREON IS DEPICTED TO QUALITY "C" UNLESS OTHERWISE NOTED.
- DESIGN GRADES SHOWN FOR PEDESTRIAN RAMPS ARE BASED UPON THE BEST INFORMATION AVAILABLE TO THE ENGINEER, BUT MUST BE CONSIDERED APPROXIMATE. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING THAT PEDESTRIAN RAMP SLOPES WITHIN THE LIMITS OF CONSTRUCTION OF THIS PROJECT ARE COMPLIANT WITH THE APPLICABLE DETAILS. AT ALL POINTS WHERE PEDESTRIAN RAMPS TIE-IN TO EXISTING FACILITIES, GRADES SHALL MATCH TO PROVIDE SMOOTH, CONTINUOUS TRANSITIONS FROM RECONSTRUCTED IMPROVEMENTS TO EXISTING IMPROVEMENTS. DISCREPANCIES BETWEEN ACTUAL FIELD CONDITIONS AND THESE PLANS

- WHICH MAY PREVENT COMPLIANT STRUCTURES FROM BEING CONSTRUCTED SHALL BE CALLED TO THE ATTENTION OF THE DESIGN ENGINEER IMMEDIATELY.
- DURING THE ENTIRE DURATION OF THIS CONSTRUCTION CONTRACT, THE CONTRACTOR SHALL IMPLEMENT STRINGENT DUST CONTROL MEASURES IN ACCORDANCE WITH CITY OF SPARKS AND WASHOE COUNTY HEALTH DEPARTMENT RULES AND REGULATIONS. THE CONTRACTOR IS REQUIRED TO SUPPRESS DUST AT ALL TIMES, 24 HOURS A DAY, REGARDLESS OF WHEN CONSTRUCTION ACTIVITIES ARE OCCURRING.
- THE CONTRACTOR SHALL, BEFORE THE START OF CONSTRUCTION, PROVIDE A NDOT RIGHT-OF-WAY PERMIT AND TRAFFIC CONTROL PLAN TO THE REGIONAL TRANSPORTATION COMMISSION FOR THEIR APPROVAL.
- THE CONTRACTOR SHALL, BEFORE THE USE OF ANY PORTION OF THE NEW STORM DRAIN SYSTEM IS STARTED, CLEAN ALL STORM DRAIN LINES FROM ANY DEBRIS, TO THE SATISFACTION OF THE ENGINEER/AGENCY.
- THE CONTRACTOR SHALL NOTIFY SPUR TRACK OWNER PRIOR TO CONSTRUCTION.

REV.	DATE	DESCRIPTION	BY	APP'D

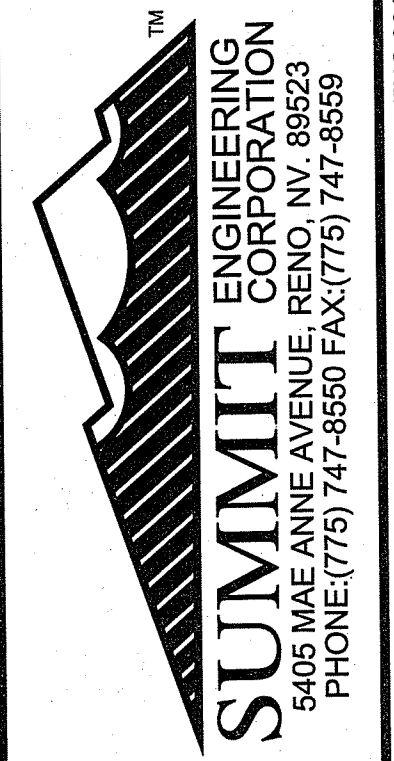
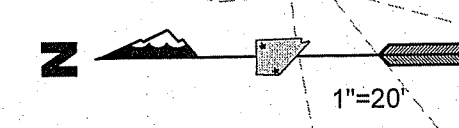
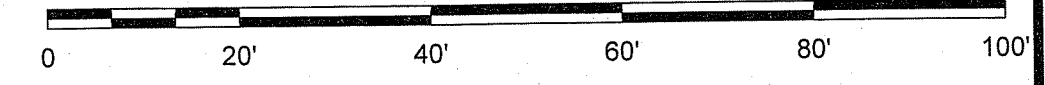
CITY OF SPARKS
MARY WAHL STORM DRAIN PROJECT
KEY MAP
WASHOE COUNTY
SPARKS
NEVADA

DESIGNED BY: C.B.
CHECKED BY: R.P.
SCALE
HORIZ: 1"=60'
VERT: N/A
JOB NO: 29711

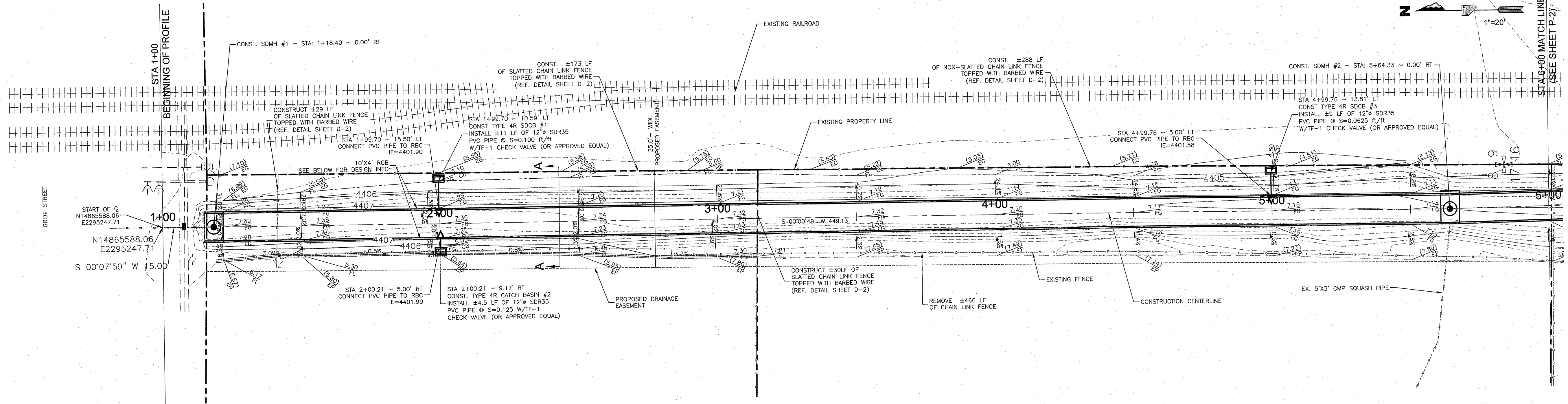


SHEET K-1 OF 6

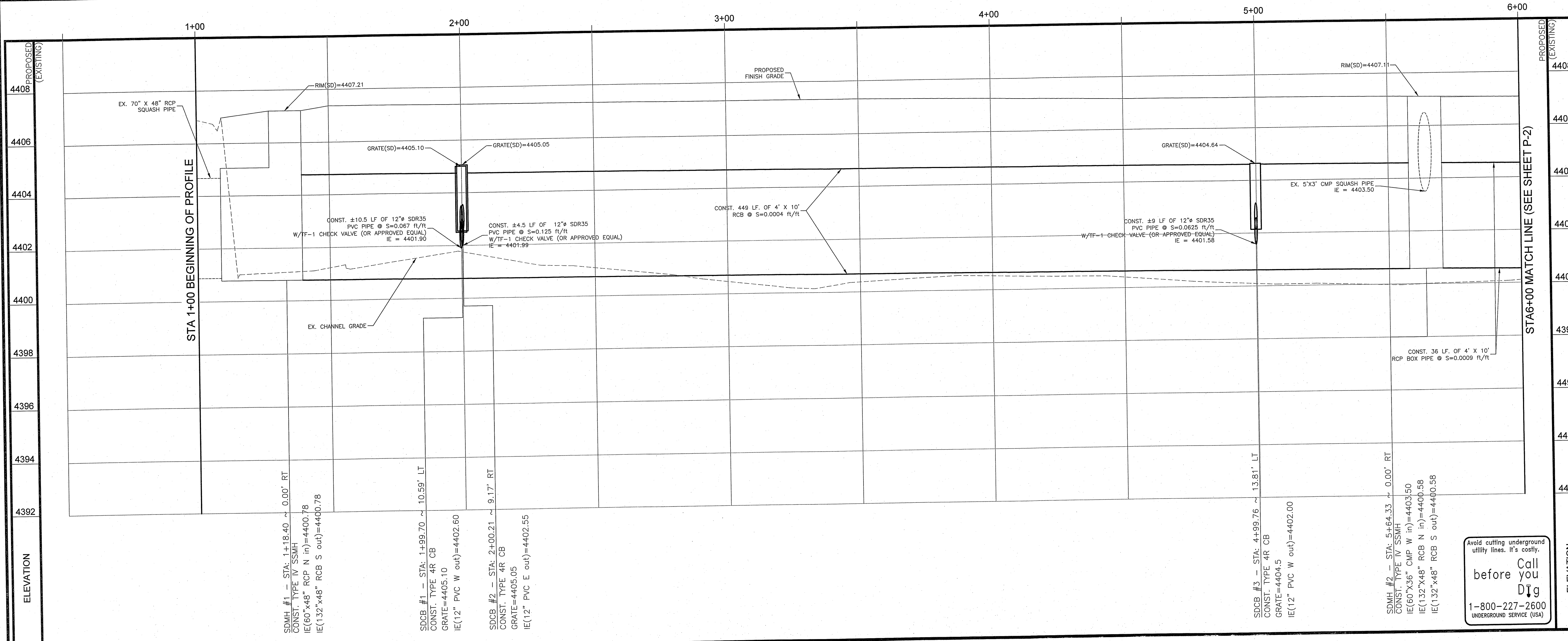




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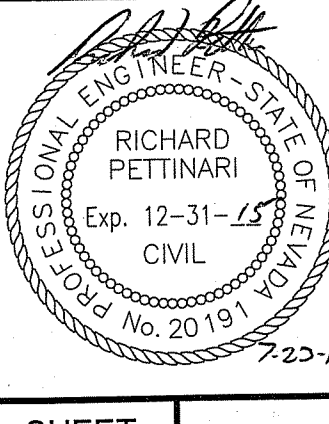
MARY WAHL DRAIN



REV.	DATE	DESCRIPTION	BY	APP'D
1	7/11/12	GRADE CHANGE		

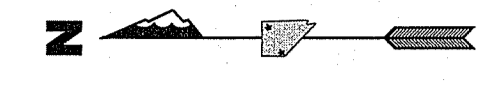
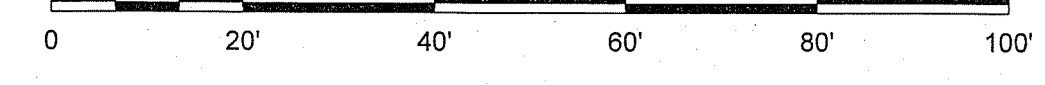
CITY OF SPARKS
 MARY WAHL STORM DRAIN PROJECT
 PROFILE / GRADING PLAN ~ STA "N" 10+00 TO STA "N" 15+50
 SPARKS WASHOE COUNTY NEVADA

DESIGNED BY: C.B.
 CHECKED BY: R.P.
 SCALE
 HORIZ: 1"=20'
 VERT: 1"=2'
 JOB NO: 29711



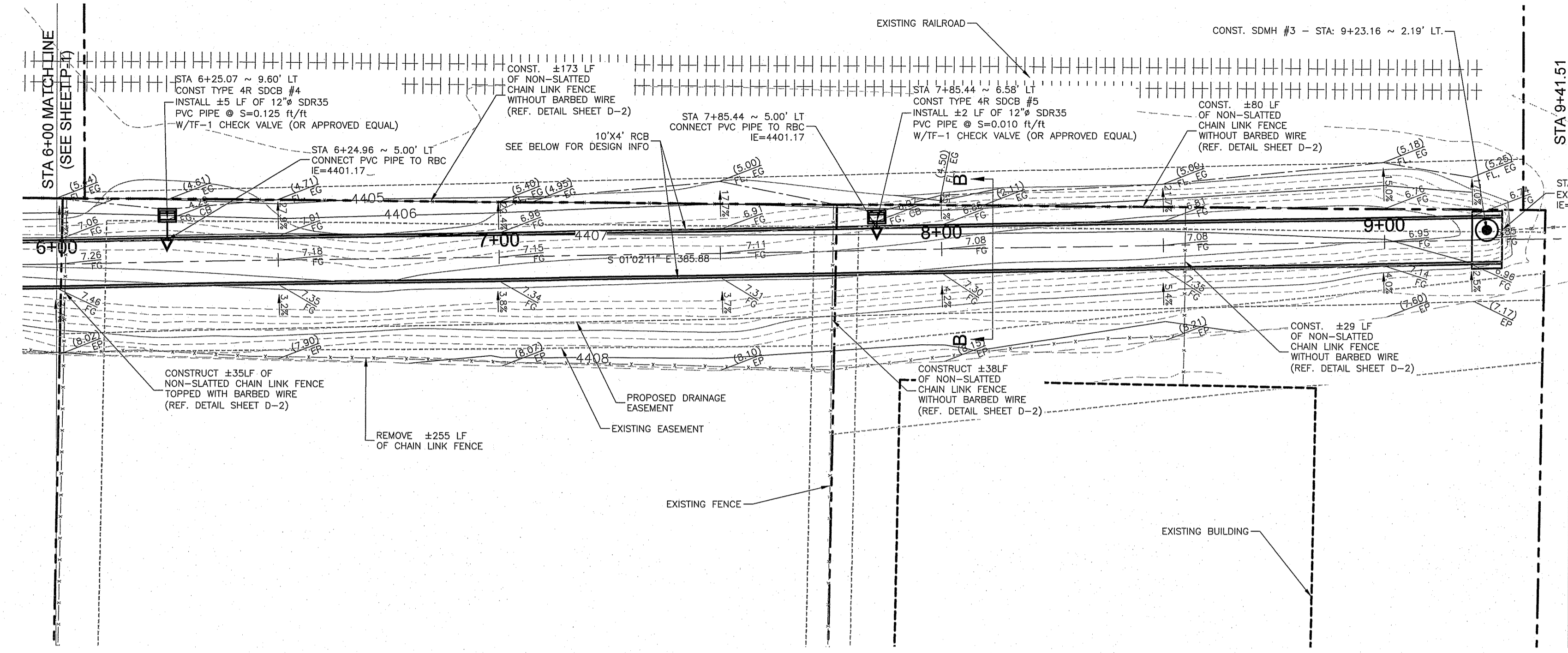
Avoid cutting underground utility lines. It's costly.
 before Call you Dig
 1-800-227-2600
 UNDERGROUND SERVICE (USA)

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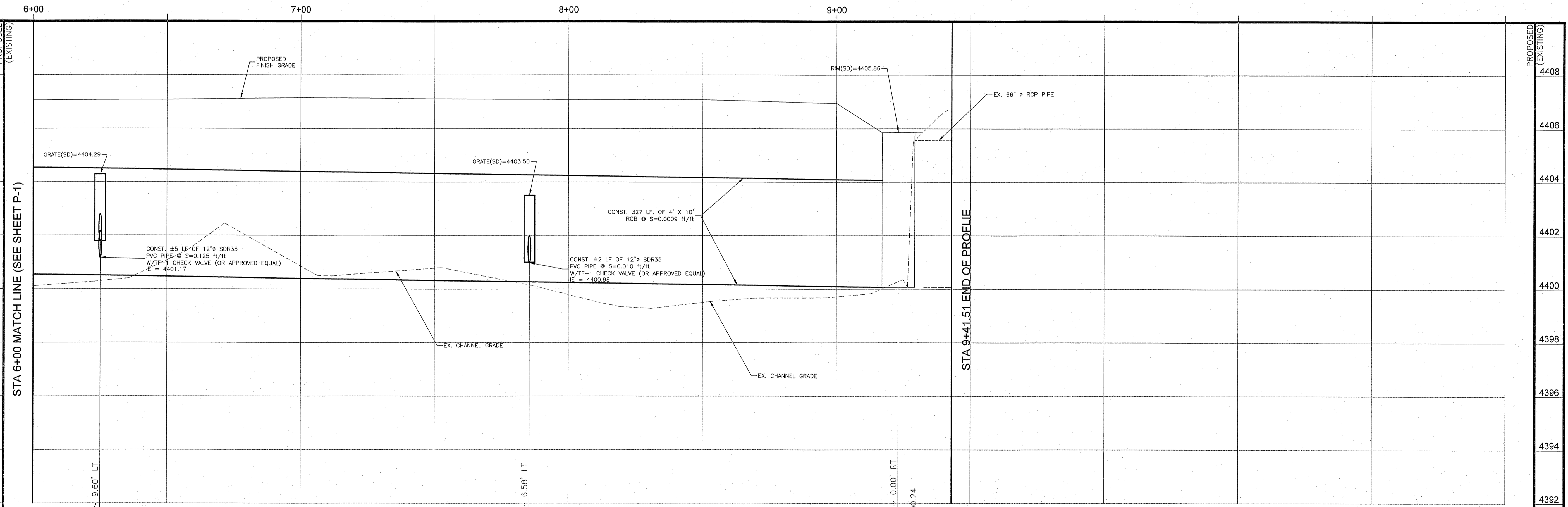


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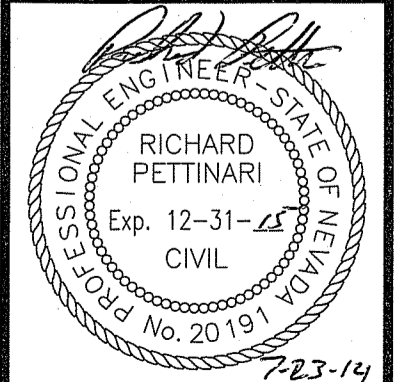
MARY WAHL DRAIN



REV.	DATE	DESCRIPTION	BY	APPD
A	7/11/12	GRADE CHANGE	CKB	

CITY OF SPARKS
 MARY WAHL STORM DRAIN PROJECT
 PROFILE / GRADING PLAN ~ STA "N" 15+50 TO STA "N" 21+00
 SPARKS WASHOE COUNTY NEVADA

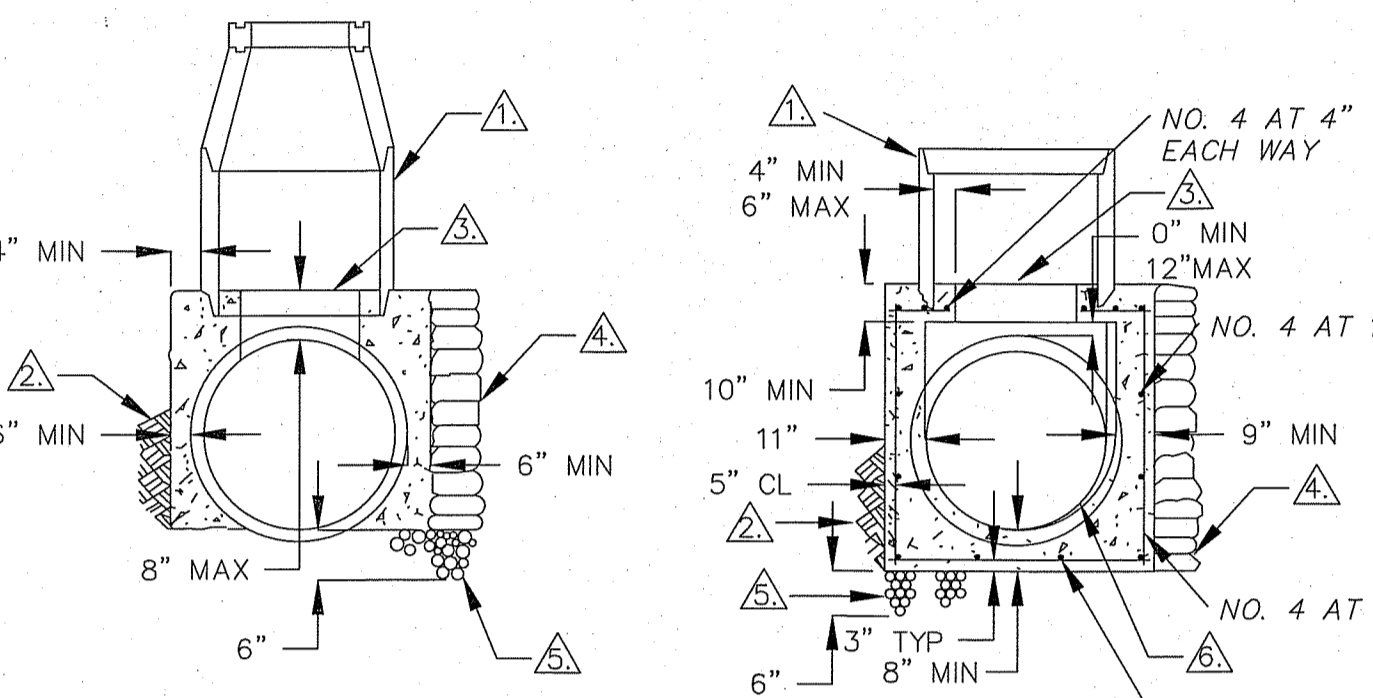
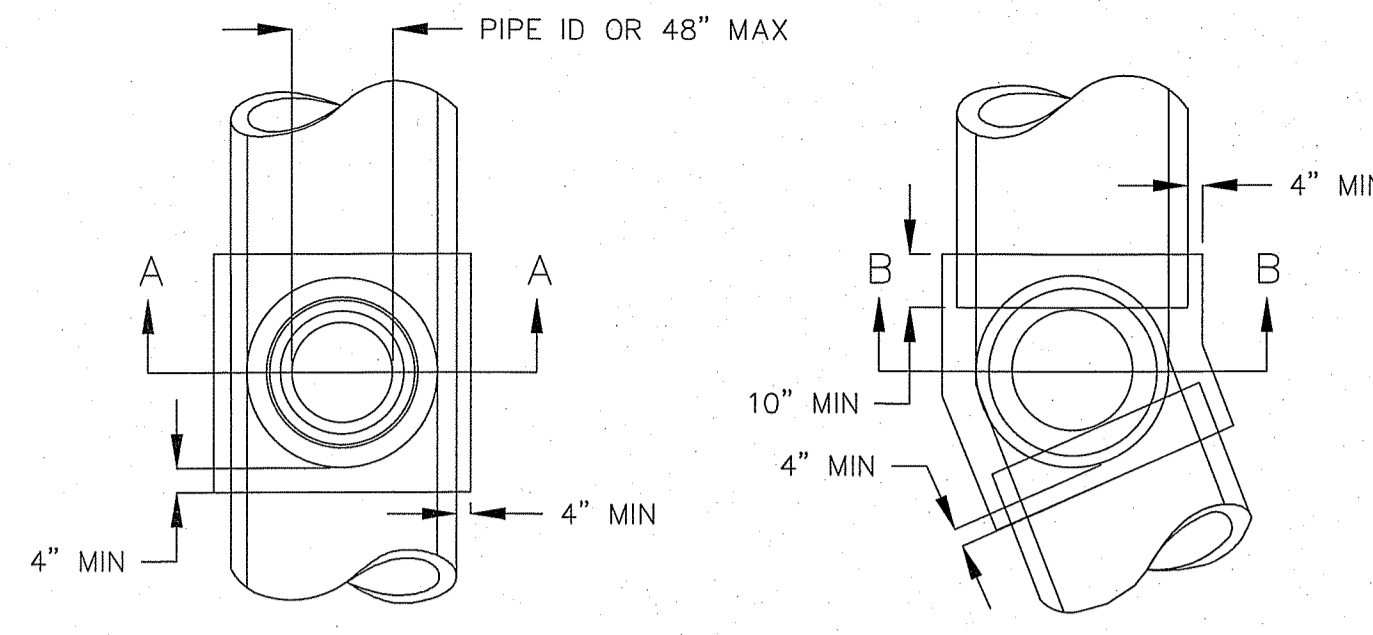
DESIGNED BY: RP
 CHECKED BY: R.P.
 SCALE
 HORIZ: 1"=20'
 VERT: 1"=2'



SHEET P-2 OF 6

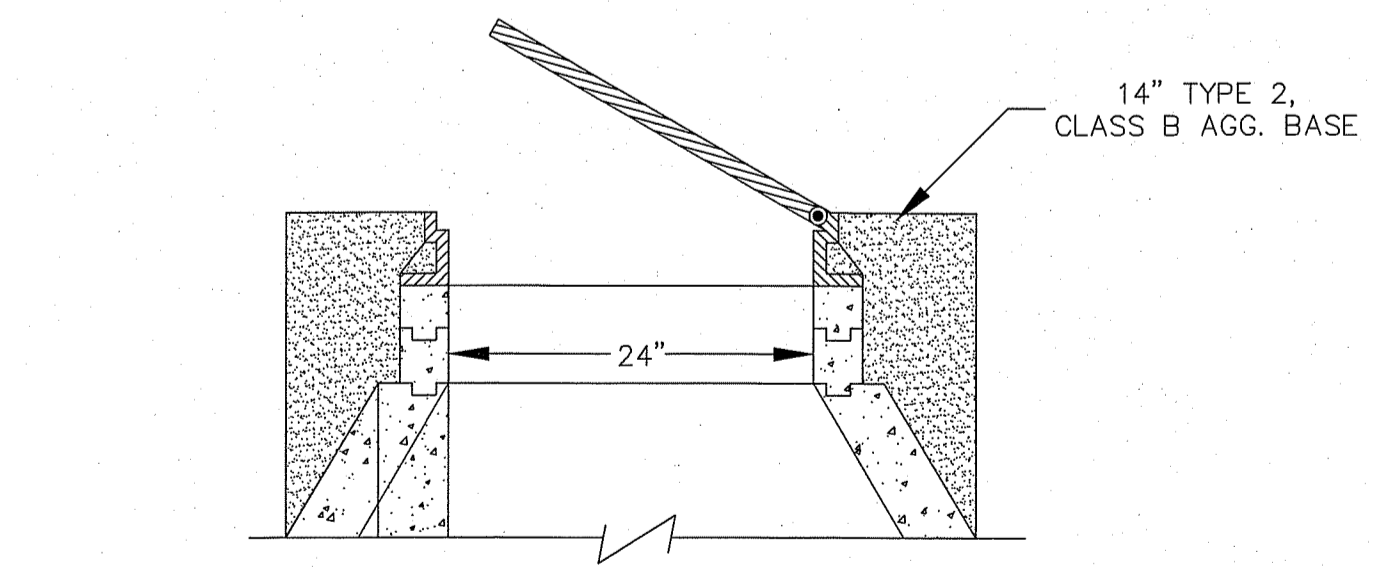
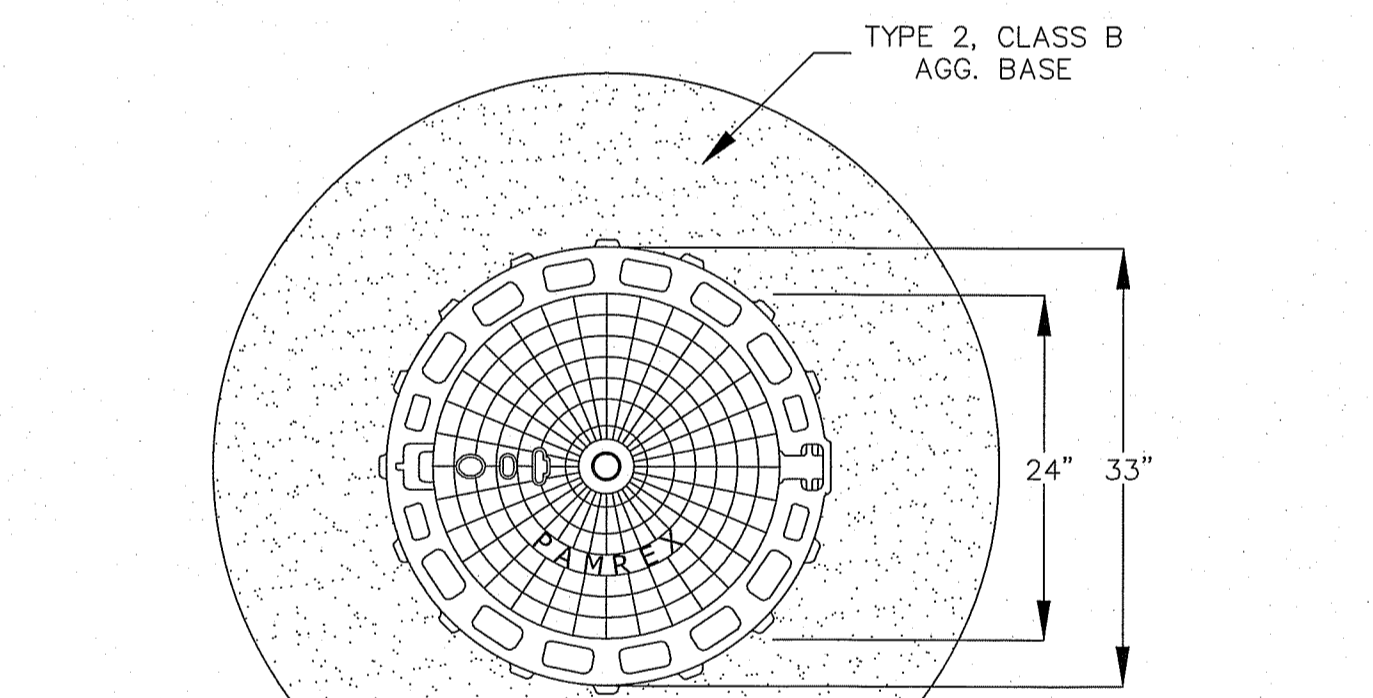
Avoid cutting underground utility lines. It's costly.
 Call before you Dig
 1-800-227-2600
 UNDERGROUND SERVICE (USA)

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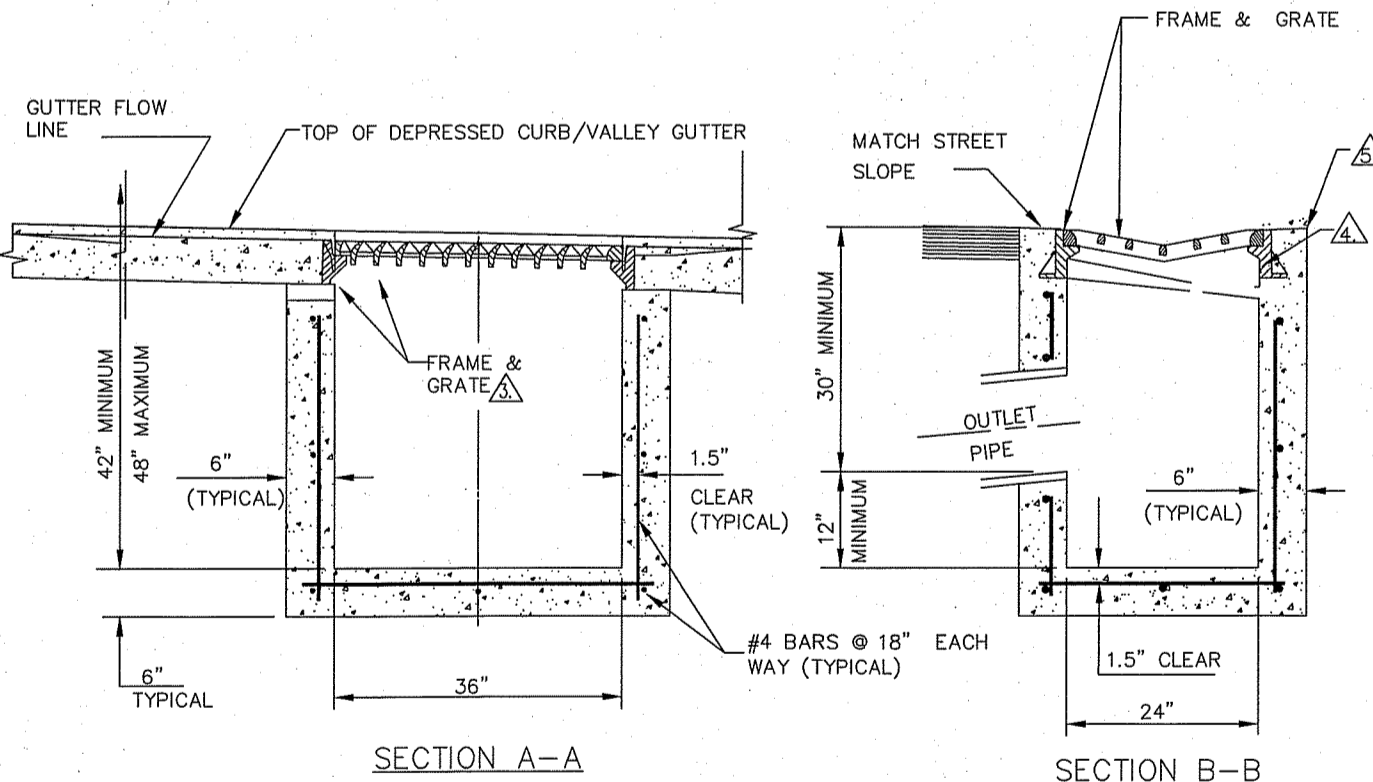
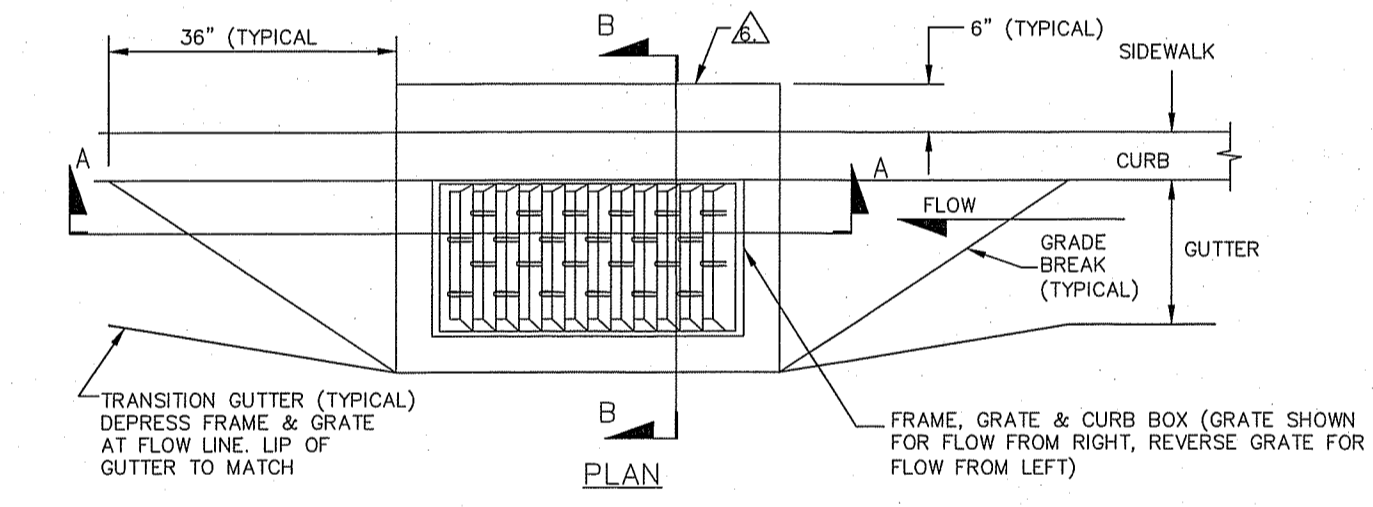
- NOTES:**
- FOR DETAIL REQUIREMENTS OF THE TYPE IV MANHOLE COMPONENTS, REFER TO STANDARD DETAIL DRAWING NOS. R-231A, AND R-231B.
 - EARTH IN PLACE CAN BE USED AS FORM.
 - FORM CIRCULAR OR ELLIPTICAL MANHOLE.
 - SANDBAGS MAY BE USED TO FORM.
 - 6\"/>
 - SLOPE TO CONFORM WITH PIPE BELOW SPRING LINE. PROVIDE SMOOTH FINISH.
 - PRECAST MANHOLE COMPONENTS SHALL CONFORM TO ASTM C-478.
 - TYPE IV MANHOLE TO BE UTILIZED FOR PIPE DIAMETERS OF 30\"/>
 - MANHOLE MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE REQUIREMENTS OF SECTION 204 \"MANHOLES AND CATCH BASINS\" OF THE STANDARD SPECIFICATIONS.
 - 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. NATURAL ANGLE OF REPOSE WILL BE ALLOWED IN ALL OTHER AREAS.
 - ALL MANHOLES SHALL BE WATERTIGHT.
 - REINFORCING STEEL SHALL BE AS SHOWN, WIRED TIGHTLY AT ALL INTERSECTIONS AND EMBEDDED AT LEAST ONE INCH CLEAR, UNLESS OTHERWISE NOTED.
 - PRIOR TO BACKFILLING, ALL MANHOLES SHALL BE VACUUM TESTED PER THE REQUIREMENTS OF ASTM C-1244.

TYPE IV MANHOLE
N.T.S.



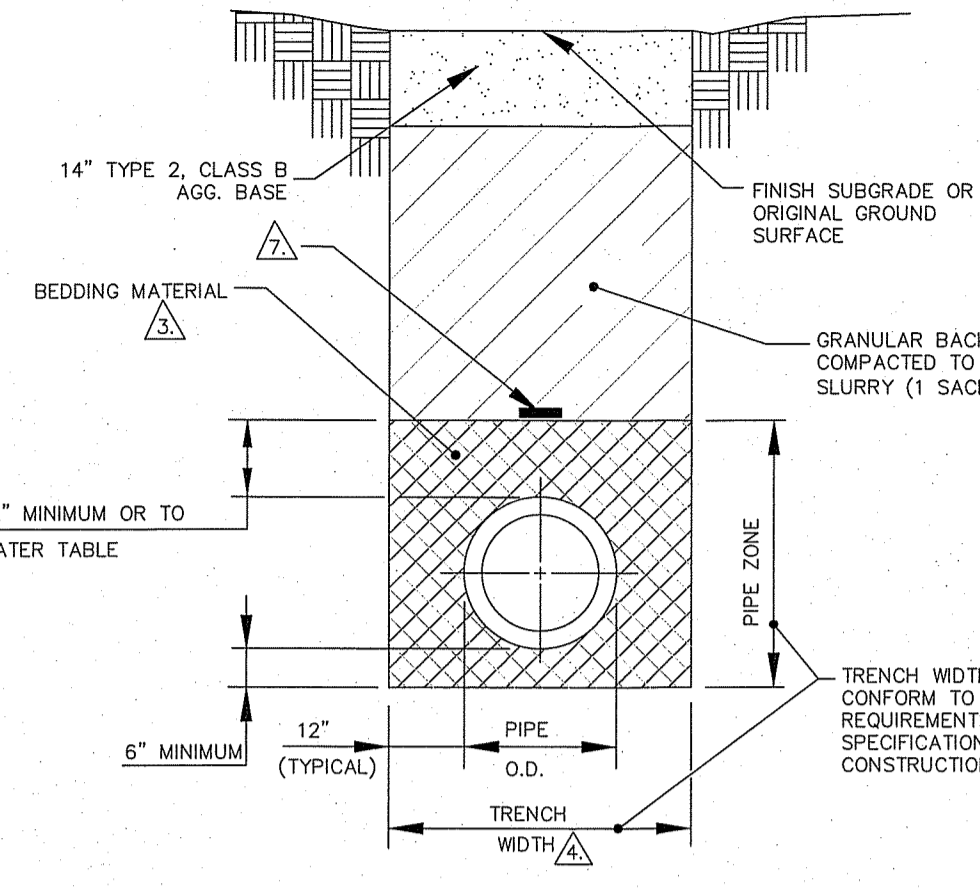
- NOTES:**
- HINGED MANHOLE COVER SHALL BE EAST JORDAN IRON WORKS 24-INCH MODEL OR APPROVED EQUAL.
 - COVER TO BE HINGED AND INCORPORATE A 90 DEGREE BLOCKING SYSTEM TO PREVENT ACCIDENTAL CLOSURE.
 - FRAME AND COVER SHALL BE ELASTOMER GASKETED.
 - ALL COMPONENTS SHALL BE BLACK COATED.

MANHOLE FRAME AND COVER
N.T.S.



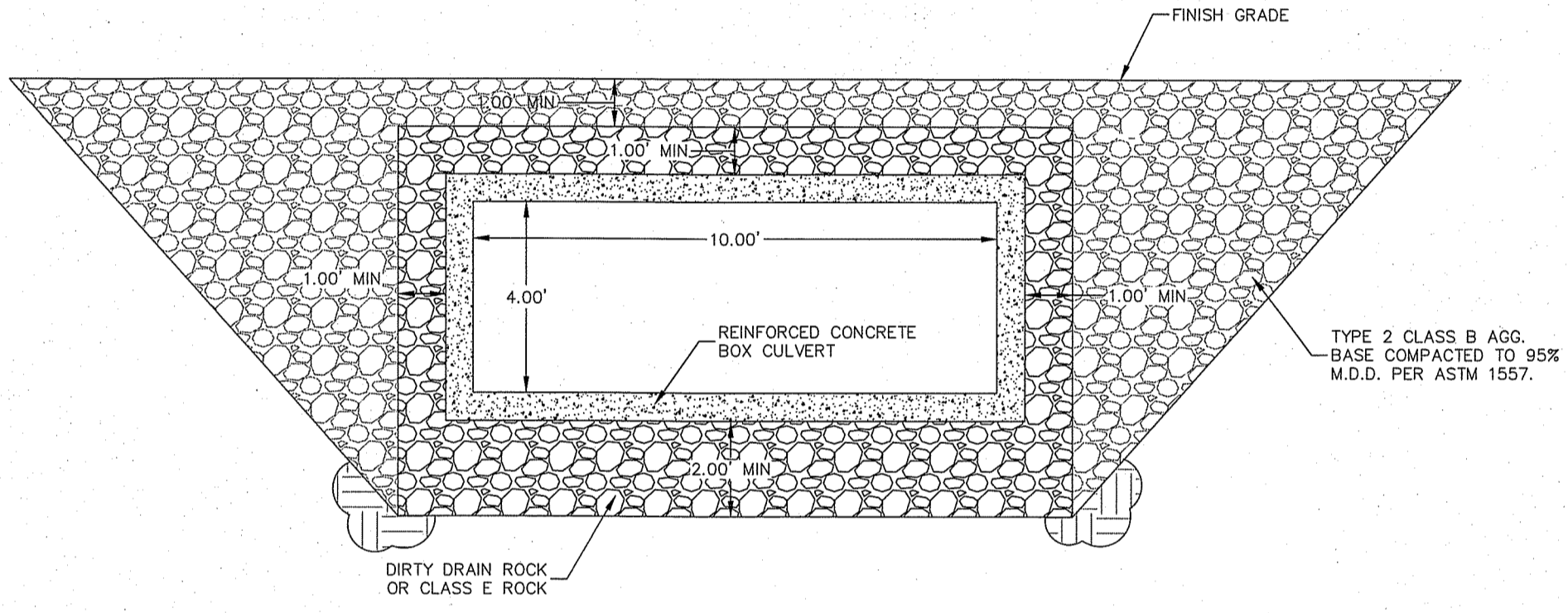
- REINFORCING STEEL SHALL BE GRADE 40 AND HAVE 1.5\"/>
- CONCRETE STRUCTURE MAY BE A PRE-CAST CONCRETE UNIT UPON APPROVAL OF THE ENGINEER. BASE OF PRE-CAST CONCRETE UNIT SHALL BE PLACED ON 6\"/>
- FRAME SHALL BE NEENAH R-3360-A WITH A TYPE L \"VANE GRATE\" OR APPROVED EQUAL, INSTALLED WITH PROPER FLOW DIRECTION.
- TILT FRAME & GRATE AS REQUIRED TO MAINTAIN FLOW DIRECTION & INSTALL DURABLE SHIMS BETWEEN THE CURB BOX & FRAME AS REQUIRED TO MATCH CURB BOX TO TOP OF DEPRESSED CURB/VALLEY GUTTER (SEE SECTION B-B).
- IF NO SIDEWALK IS PRESENT, POUR 6\"/>
- INSTALL GREASE TRAP PER STANDARD DETAIL DRAWING NO. R-213 (311).
- DUAL CATCH BASINS ARE TO BE WET SET IN 6\"/>
- EACH CATCH BASIN SHALL BE CAST WITH A FISH IMAGE AND THE WORDS \"NO DUMPING! DRAINS TO WATERWAYS\" IN THE TOP OF THE CURB BOX.
- FRAMES AND GRATES SHALL BE MATCHED TO ACHIEVE A CLOSE TOLERANCE FIT, WITH MINIMAL GAPS, AS APPROVED BY THE ENGINEER.

DROP INLET
N.T.S.

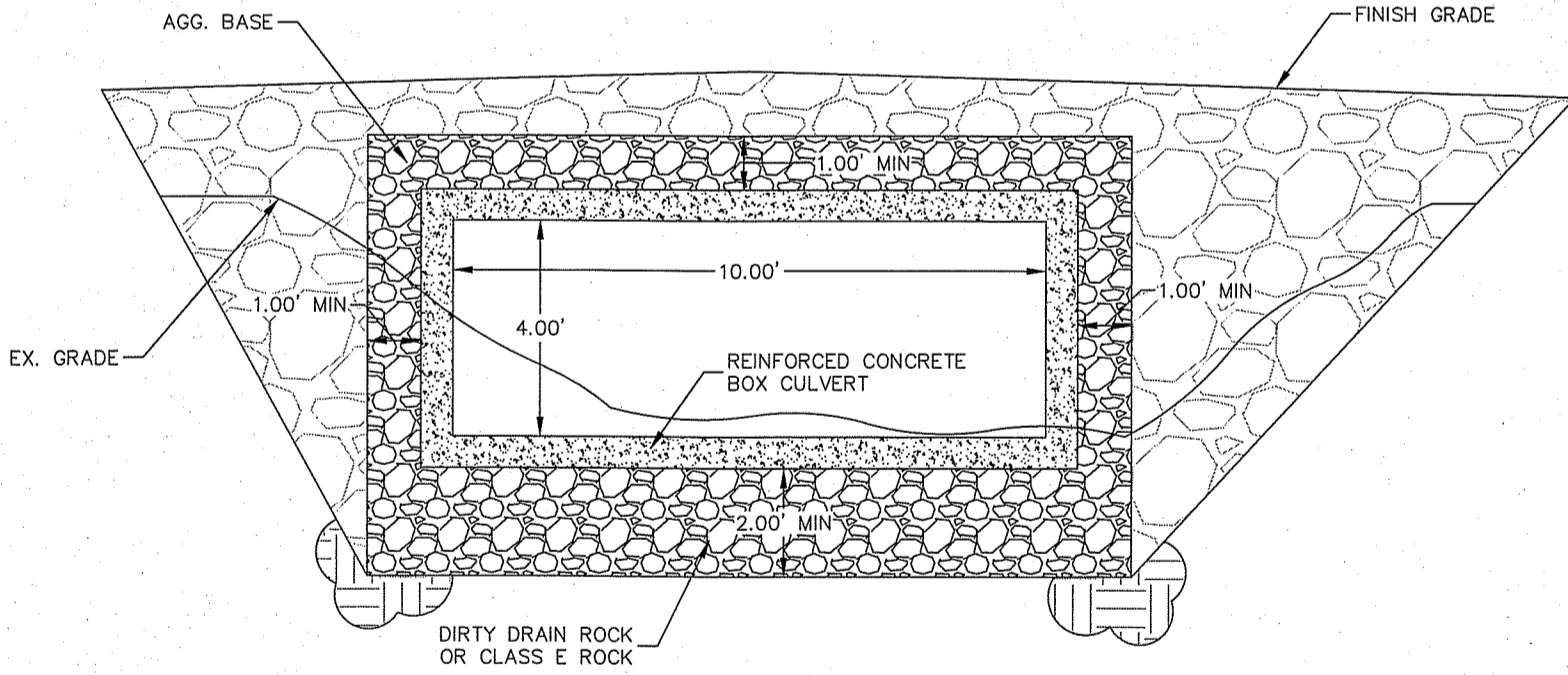


- NOTES:**
- A PERMIT MUST BE OBTAINED FROM THE CITY ENGINEER PRIOR TO CUTTING ANY PUBLIC RIGHT-OF-WAY. 24 HOURS PRIOR TO TRENCH EXCAVATION, THE PERMITEE MUST NOTIFY THE CITY EXCAVATION PERMIT INSPECTOR OR DESIGN ENGINEER. SEE RELATED STANDARD DETAIL DRAWING NOS. R-103 (141), R-204 (306), R-119 (312), R-120 (305,320) AND R-121 (305,320).
 - ALL MATERIALS AND INSTALLATION PROCEDURES SHALL BE IN ACCORDANCE WITH STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, LATEST REVISION.
 - 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\", \"B\", OR \"C\", COMPACTED TO 90% MINIMUM. FOR TRAFFIC/ELECTRICAL CONDUIT TRENCHES LESS THAN 12\"/>
 - ALL EXCAVATIONS SHALL CONFORM TO THE LATEST O.S.H.A. REQUIREMENTS. SHORING OR SLOPED CUT MAY BE NECESSARY, BUT THERE WILL BE NO PAYMENT FOR ADDITIONAL EXCAVATION, BEDDING, BACKFILL, OR SHORING.
 - SEE STANDARD DETAIL DRAWING NOS. R-123A (305), R-123B (305) AND R-123C (305) FOR TRENCH SLURRY BACKFILL SPECIFICATIONS.
 - EDGE OF 4\"/>
 - PIPE TAPE IDENTIFICATION OF UTILITY SHALL BE INSTALLED.

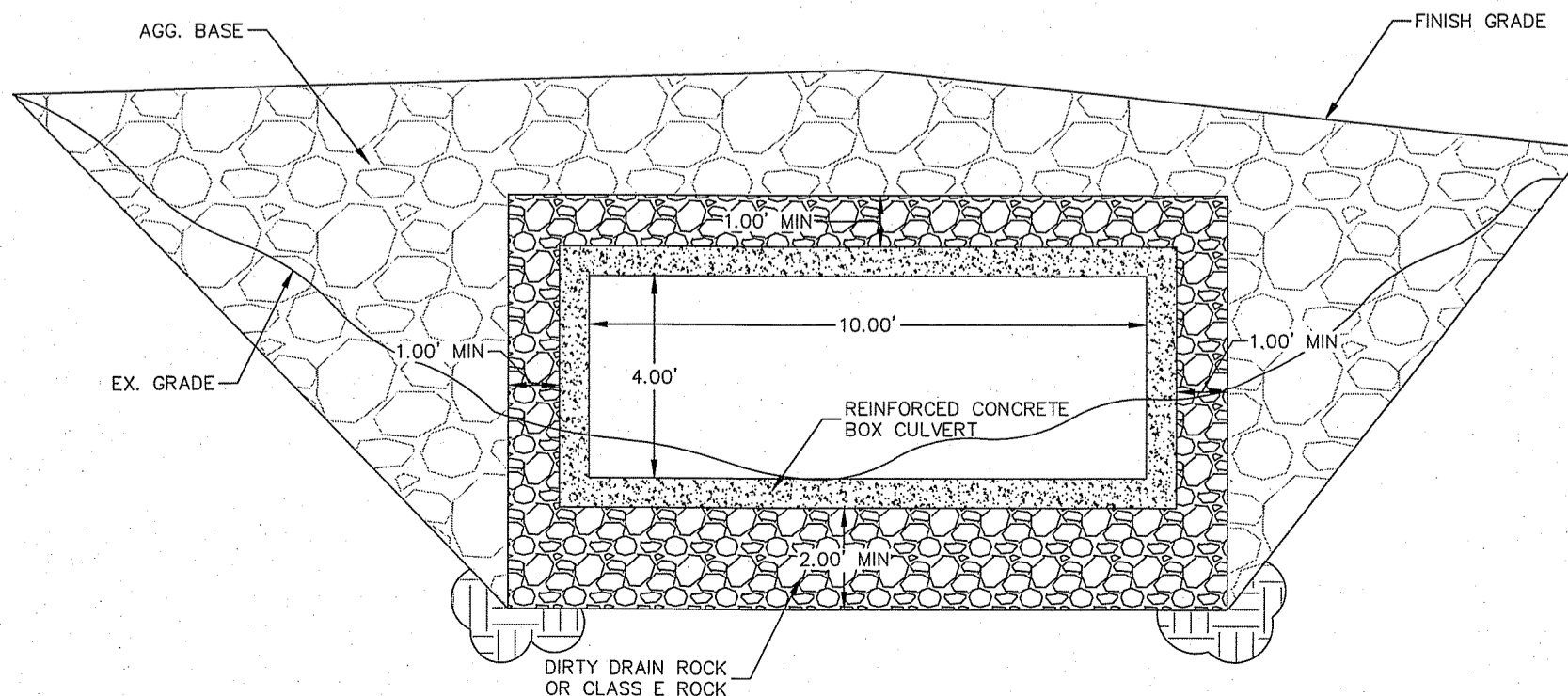
TRENCH EXCAVATION/BACKFILL
N.T.S.



BOX CULVERT INSTALLATION
DETAIL
N.T.S.



CROSS SECTION A-A
N.T.S.



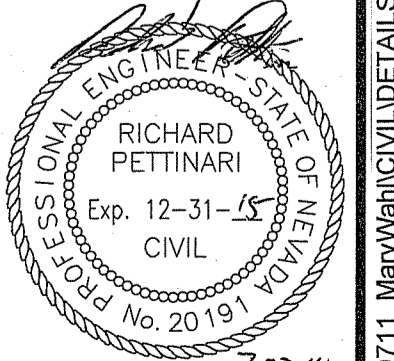
CROSS SECTION B-B
N.T.S.

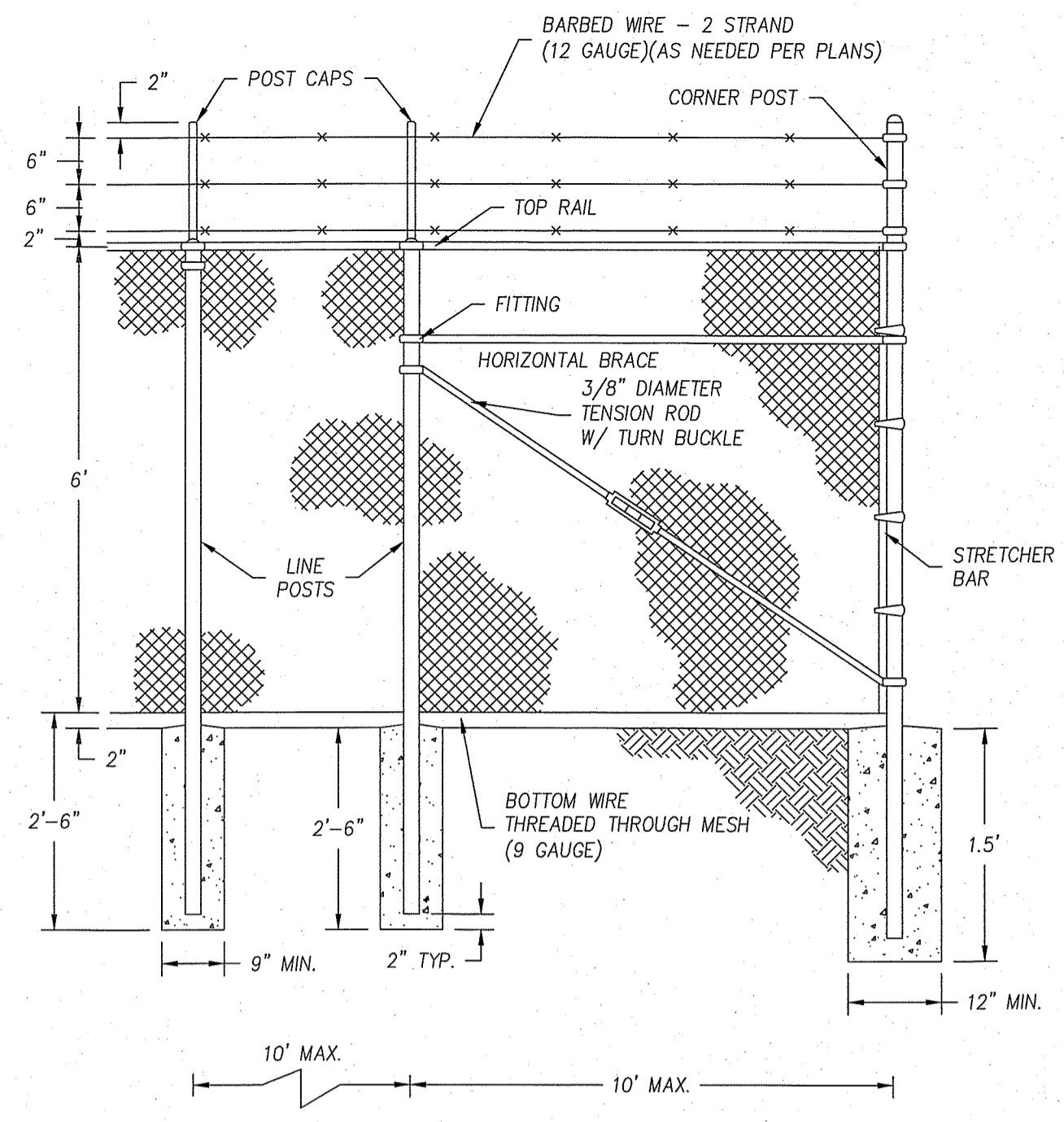


REV.	DATE	DESCRIPTION	BY	APP'D

CITY OF SPARKS
MARY WAHL STORM DRAIN PROJECT
DETAIL SHEET
SPARKS WASHOE COUNTY NEVADA

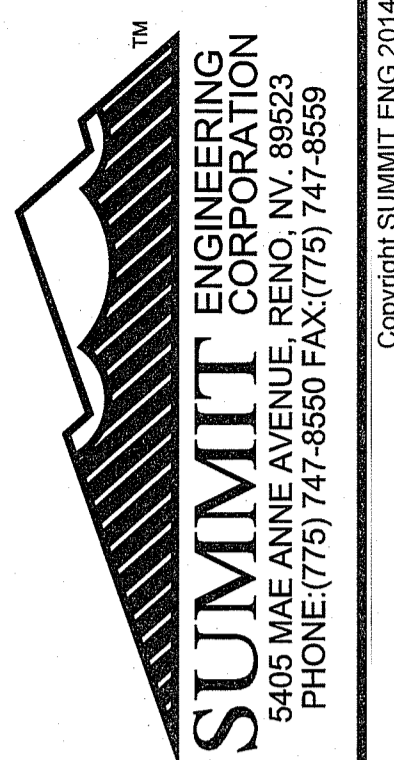
DESIGNED BY: C.B.
CHECKED BY: R.P.
SCALE
HORIZ: NTS
VERT: N/A
JOB NO: 29711





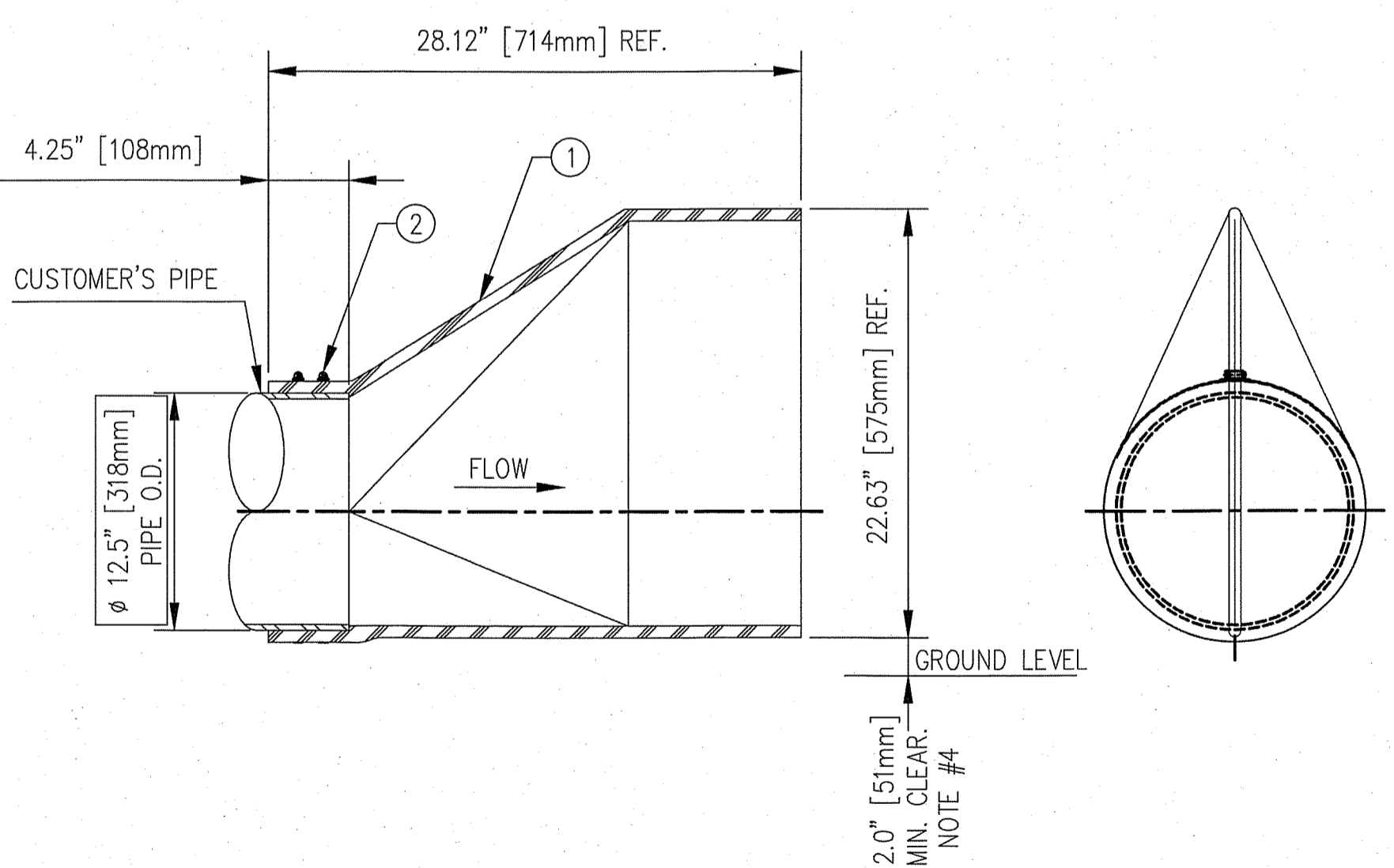
NOTES:
 1. ALL FENCE MATERIALS SHALL COMPLY WITH SECTION 209.03 OF THE LATEST EDITION OF THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (ORANGE BOOK).
 2. SLATS SHALL BE PLASTIC AND COMPLY WITH SECTION 209.03.02 OF THE LATEST EDITION OF THE ORANGE BOOK.
 3. ALL CONSTRUCTION METHODS USED FOR CONSTRUCTION OF FENCING SHALL COMPLY WITH SECTION 327.05 OF THE LATEST EDITION OF THE ORANGE BOOK.

NO.	REVISED	DATE	STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION	SECTION:	WASHOE
			CHAIN LINK FENCE	DRAWING NO:	WR-3.10
				DATE:	7/09
				PAGE:	46



REV.	DATE	DESCRIPTION	BY	APPD

ITEM	QTY.	DESCRIPTION	MAT'L
1	1	CHECK VALVE SLEEVE	MUST BE SUPPLIED EPDM
2	2	HOSE CLAMPS	MUST BE SUPPLIED xxx



NOTES:
 1. MAXIMUM BACK PRESSURE LINE PRESSURE
 2. VALVE IS TO BE MOUNTED WITH THE OUTLET IN THE VERTICAL POSITION
 3. TIDEFLEX TO FIT ON A O.D. PIPE
 4. BECAUSE OF SAND, ROCK AND OTHER DEBRIS ACCUMULATION BY BACKFLOW OF WATER THE SUGGESTED BOTTOM CLEARANCE SHOULD BE PROVIDED

PRELIMINARY DRAWING
 NOT FOR APPROVAL PURPOSES

OPPORTUNITY No: SALES ORDER No: TXX-XXXX

Tideflex Technologies
 A Division of Red Valve Company, Inc.

600 N. BELL AVE.
 CARNEGIE, PA. 15106
 info@tideflex.com
 412.279.0044
 fax 412.279.5410

TT PRODUCT: 12.5" TF-1 TIDEFLEX CHECK VALVE
 TT PART No: TF1-120-APPROVAL

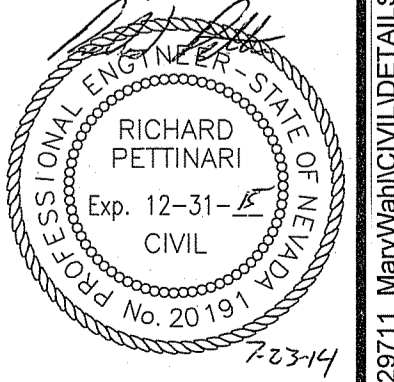
DR. BY: MVH DATE: 11-20-07 CHKD. BY: DATE: REV
 CAD SCALE: FULL
 PLOT SCALE: .125 DWG No: TTS-DWG

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CUSTOMER: XXX
 ORDER No: XXX

CITY OF SPARKS
 MARY WAHL STORM DRAIN PROJECT
 DETAIL SHEET
 SPARKS WASHOE COUNTY NEVADA

DESIGNED BY: C.B.
 CHECKED BY: R.P.
 SCALE
 HORIZ: NTS
 VERT: N/A
 JOB NO: 29711



SHEET D-2 OF 6