

DEPARTMENT OF PUBLIC WORKS

Mayor:
CAROLYN G. GOODMAN

City Council:
MICHELE FIORE (Mayor Pro-Tem)
STAVROS S. ANTHONY
CEDRIC CREAR
BRIAN KNUDSEN
VICTORIA SEAMAN
OLIVIA DIAZ

City Manager:
SCOTT D. ADAMS

Director of Public Works:
MIKE JANSSEN, P.E., P.T.O.E.

City Engineer:
ALLEN E. PAVELKA, P.E.



OSO BLANCA SEWER EXTENSION

Funded By:
CLV SANITATION FUNDS

Reviewed By:

Allen Pavelka 9-17-19
CLV CITY ENGINEER DATE

Ref M Gull 9/17/19
CLV PROJECT MANAGER DATE

W. Kraker 9.12.19
CLV CITY TRAFFIC ENGINEER DATE

CLV CONSTRUCTION MANAGER 9/12/19
DATE

Joseph V. D'Amico 8/21/19
REGIONAL TRANSPORTATION No RTE Funds with DATE
COMMISSION OF SOUTHERN NEVADA THIS PROJECT

TORI DICKLEY 8/1/19
SOUTHWEST GAS CORPORATION DATE

Mari Kay Greer 2/31/19
CENTRAL TELEPHONE COMPANY DATE

d/b/a CENTURYLINK
THE AFFIXED CENTURYLINK NEVADA APPROVAL DOES NOT ASSUME OR GUARANTEE LIABILITY FOR KNOWN OR UNKNOWN CONFLICTS WITH EXISTING OR PROPOSED IMPROVEMENTS. RESOLUTION OF ANY CONFLICT WILL BE ACCOMPLISHED PURSUANT TO LOCAL ORDINANCES, NEVADA REVISED STATUTES AND/OR PUBLIC UTILITY COMMISSION STANDARD REGULATIONS.

Celina Lopez Celina Lopez 8/5/19
COX COMMUNICATIONS LAS VEGAS, INC. DATE

Amy Courtney Amy Courtney 9/11/19
NV ENERGY - DISTRIBUTION DATE

NV ENERGY ACKNOWLEDGES THAT WE HAVE RECEIVED YOUR PLANS AND WILL PROVIDE SERVICE TO ALL ELECTRICAL NEEDS ASSOCIATED WITH THIS PROJECT. NV ENERGY RESERVES THE RIGHT TO ADDRESS ANY EXISTING OR FUTURE CONFLICTS ONCE THE FINAL DESIGN IS COMPLETED. THE NEW SERVICE AND THE RESOLUTION OF ANY CONFLICTS WILL BE ACCOMPLISHED PURSUANT TO THE NEVADA PUBLIC UTILITY COMMISSION'S RULES AND REGULATIONS.

8/15/19
DATE

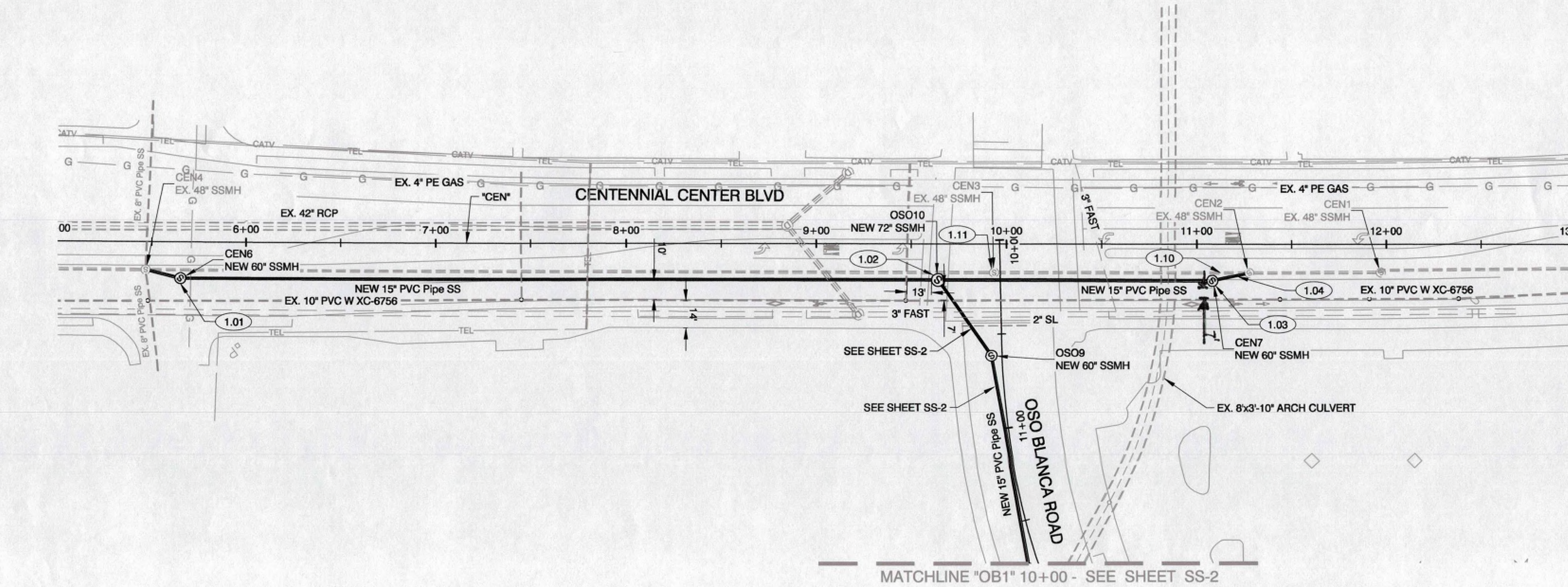
APPROVED FOR CONSTRUCTION

PROJECT NO. 136515 FIRST APPROVED DATE: 8-29-11
SHEETS: CV, GN, SS-1, SS-2, & RC-1

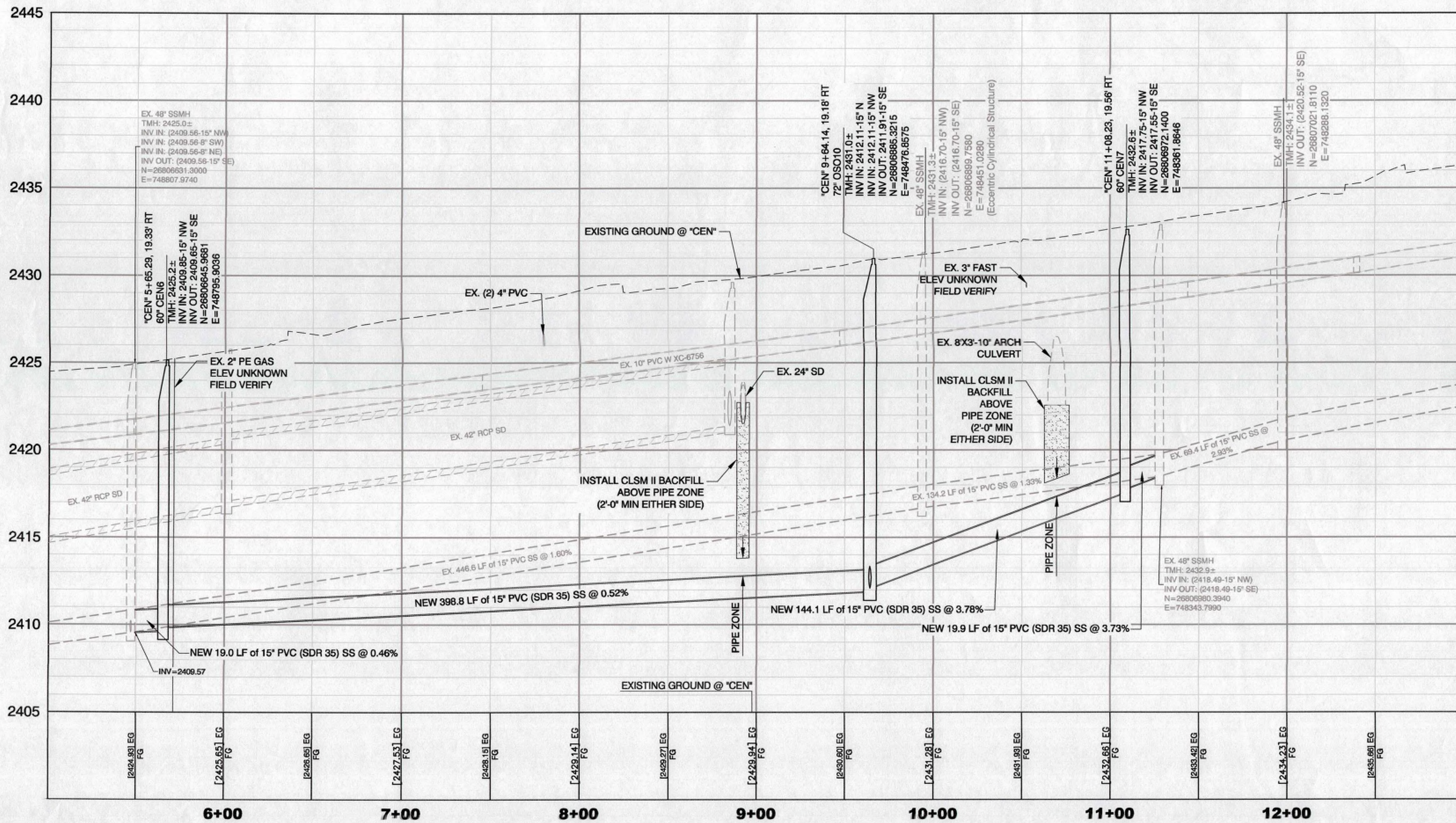
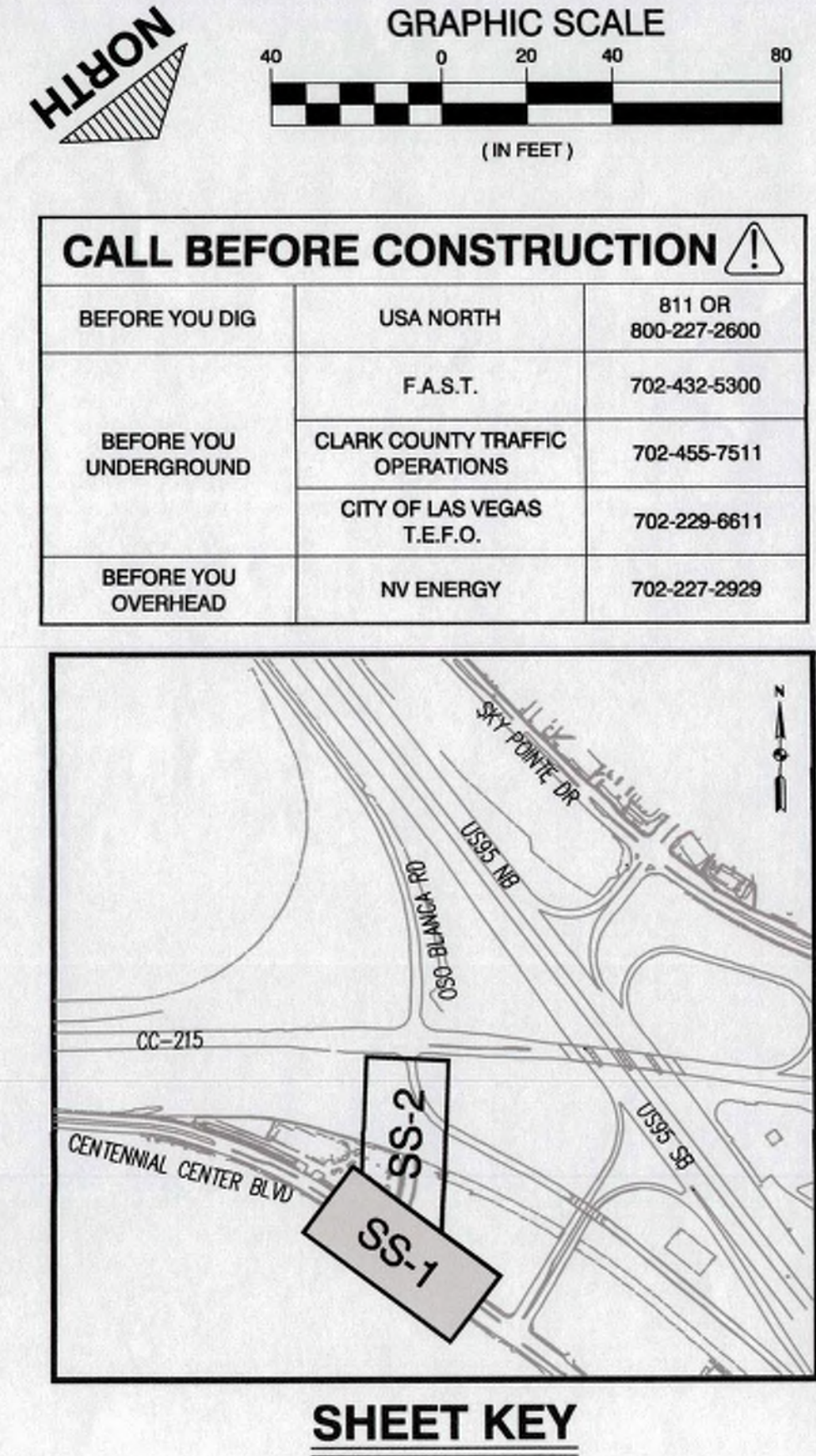
THE SIGNATURE ABOVE ACKNOWLEDGES THAT THE UTILITY COMPANY REPRESENTATIVE HAS REVIEWED THE PLANS, AND THAT TO THE BEST OF HIS OR HER KNOWLEDGE THE UTILITY LINES ARE SHOWN IN THE CORRECT LOCATIONS AND ARE THE CORRECT SIZES. WHILE SUCH DATA HAS BEEN COLLECTED WITH REASONABLE CARE, THERE IS NO EXPRESSED OR IMPLIED GUARANTEE THAT THE LOCATIONS ARE EXACT. THE CONTRACTOR SHALL BEAR THE RESPONSIBILITY OF OBTAINING THE ACTUAL FIELD LOCATIONS.

THE SIGNATURE ABOVE FURTHER ACKNOWLEDGES THAT THE UTILITY COMPANY DOES NOT ANTICIPATE CONSTRUCTION OR MAINTENANCE IN THE PROJECT AREA FOR FIVE (5) YEARS IN CONFORMANCE WITH THE CLV NO-CUT POLICY.

TITLE OSO BLANCA SEWER EXTENSION	PREPARED FOR CITY OF LAS VEGAS		PREPARED BY  Louis Berger 444 East Warm Springs Road, Ste 118 Las Vegas, Nevada 89119 Phone: 702.736.6632 - Fax: 702.407.1305																	
	SHEET COVER SHEET	H# 60223 DATE: 07/30/2019 SUBMITTAL STAGE: FINAL		BID# DESIGNED BY: LDN DRAWN BY: FME CHECKED BY: JSD	NO.	DATE	SHEET	REVISIONS												
SHEET 			CV 01 OF 08 DRAWING NO. 307V1166																	



- NOTES:
1. SEE NDOT PLANS FOR HORIZONTAL CONTROL.
 2. ALL EXISTING UTILITIES ARE TO BE PROTECTED IN PLACE UNLESS OTHERWISE NOTED.
 3. ALL SEWER MANHOLES SHALL BE CORROSION PROTECTED IN ACCORDANCE WITH DCSWCS SECTION 2.2.10.1 OR SHALL BE APPROVED POLYMER MANHOLES.
 4. ALL SEWER MANHOLES SHALL BE CONSTRUCTED PER DCSWCS STANDARD PLATES SD-1-A, SD-2, SD-4 AND SD-9.
 5. SEWER LINES SHALL BE INSTALLED PER DETAIL 1/DT-1 AND DCSWCS STANDARD PLATE SD-18.
 6. PROTECT IN PLACE AND ADJUST LVWD EXISTING FACILITIES TO FINISHED GRADE PER UDACS. ALL LVWD FACILITIES SHALL BE ACCESSIBLE AT ALL TIMES.



CONSTRUCTION NOTES

- (1.01) "CEN" 5+65.29 CONSTRUCT 60" MANHOLE, 19.32' RT (RIM ELEV= 2425.2'±, INV ELEV= 2409.65', H = 15.55'). INSTALL 15" X 19' PVC FROM "CEN" 5+65.29, 19.33' RT (UIE= 2409.65') TO "CEN" 5+46.83, 14.84' RT (LIE= 2409.56'). CONNECT TO EXISTING 48" MANHOLE.
- (1.02) "CEN" 9+64.14 CONSTRUCT 72" MANHOLE, 19.17' RT (RIM ELEV= 2431.0'±, INV ELEV= 2411.91', H = 19.09'). INSTALL 15" X 399' PVC FROM "CEN" 9+64.14, 19.18' RT (UIE= 2411.91') TO "CEN" 5+65.29, 19.33' RT (LIE= 2409.85'). CONNECT TO 60" MANHOLE.
- (1.03) "CEN" 11+08.23 CONSTRUCT 60" MANHOLE, 19.56' RT (RIM ELEV= 2432.6'±, INV ELEV= 2417.55', H = 15.05'). INSTALL 15" X 145' PVC FROM "CEN" 11+08.23, 19.56' RT (UIE= 2417.55') TO "CEN" 9+64.14, 19.18' RT (LIE= 2412.11'). CONNECT TO 72" MANHOLE.
- (1.04) "CEN" 11+27.63 CONNECT TO EXISTING 48" MANHOLE. INSTALL 15" X 20' PVC FROM "CEN" 11+27.63, 15.31' RT (UIE= 2418.49') TO "CEN" 11+08.23, 19.56' RT (LIE= 2417.75'). CONNECT TO 60" MANHOLE.

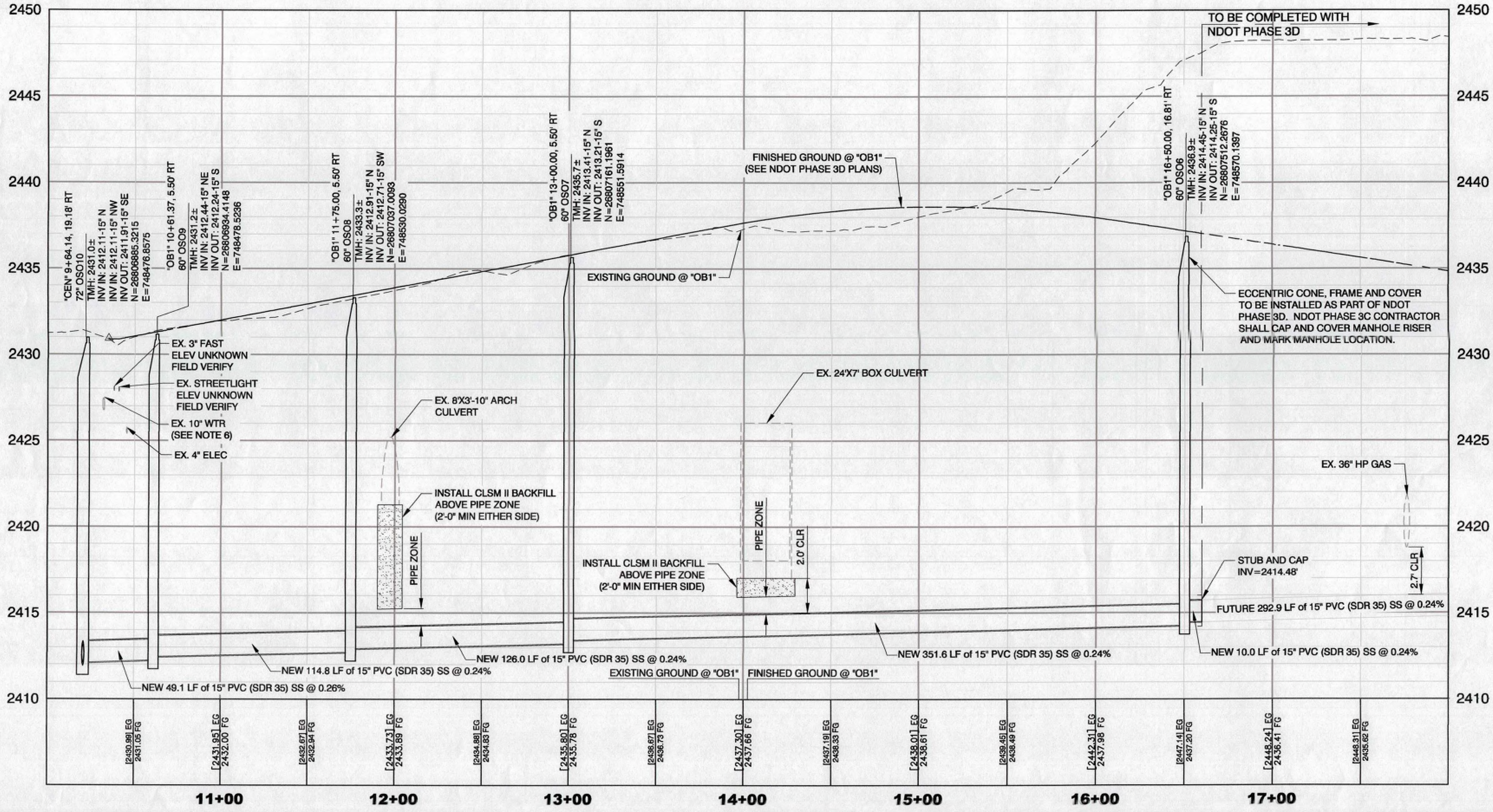
REMOVAL NOTES

- (1.10) "CEN" 11+27.63 TO "CEN" 9+93.46 ABANDON EXISTING 15"X134' PVC SANITARY SEWER PIPE PER DCSWCS 3.18.1.C.
- (1.11) "CEN" 9+93.46 TO "CEN" 5+46.83 REMOVE EXISTING SANITARY SEWER MANHOLE PER DCSWCS 3.18.2.A AND ABANDON EXISTING 15"X447' PVC SANITARY SEWER PIPE PER DCSWCS 3.18.1.C.

APPROVED FOR CONSTRUCTION
LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES
PROJECT NO. 136515 FIRST APPROVED DATE: 8-27-19

CITY OF LAS VEGAS		DESIGNED BY: LDN		DRAWN BY: FME		CHECKED BY: JSD	
H# 60223		DATE: 07/30/2019		SUBMITTAL STAGE: FINAL			
TITLE: OSO BLANCA SEWER EXTENSION		SHEET: SS-1		DRAWING NO. 307V1166		REVISIONS	
PROJECT NO. 136515		FIRST APPROVED DATE: 8-27-19		DRAWING NO. 307V1166		NO. DATE	

LOUIS BERGER
444 East Warm Springs Road, Ste 118
Las Vegas, Nevada 89119
Phone: 702.735.6632 • Fax: 702.407.305



- NOTES:
1. SEE NDOT PLANS FOR HORIZONTAL CONTROL.
 2. ALL EXISTING UTILITIES ARE TO BE PROTECTED IN PLACE UNLESS OTHERWISE NOTED.
 3. ALL SEWER MANHOLES SHALL BE CORROSION PROTECTED IN ACCORDANCE WITH DCSWCS SECTION 2.2.10.1 OR SHALL BE APPROVED POLYMER MANHOLES.
 4. ALL SEWER MANHOLES SHALL BE CONSTRUCTED PER DCSWCS STANDARD PLATES SD1-A, SD-2, SD-4 AND SD-9.
 5. SEWER LINES SHALL BE INSTALLED PER DETAIL 1/DT-1 AND DCSWCS STANDARD PLATE SD-18.
 6. PROTECT IN PLACE AND ADJUST LVWD EXISTING FACILITIES TO FINISHED GRADE PER UDACS. ALL LVWD FACILITIES SHALL BE ACCESSIBLE AT ALL TIMES.
 7. CONTRACTOR MUST SUBMIT PIPE SUPPORT DETAIL, PREPARED BY A NEVADA LICENSED ENGINEER, TO LVWD ENGINEERING SERVICES AT LEAST 30 DAYS PRIOR TO CONSTRUCTION TO SHOW HOW WATERLINE(S) WILL BE SUPPORTED DURING EXCAVATION AND BACKFILL. SUPPORTED PIPE MAY BE EXPOSED FOR NO LONGER THAN 7 DAYS MAXIMUM.

GRAPHIC SCALE
(IN FEET)

CALL BEFORE CONSTRUCTION

BEFORE YOU DIG	USA NORTH	811 OR 800-227-2600
BEFORE YOU UNDERGROUND	F.A.S.T.	702-432-5300
	CLARK COUNTY TRAFFIC OPERATIONS	702-455-7511
	CITY OF LAS VEGAS T.E.F.O.	702-229-6611
BEFORE YOU OVERHEAD	NV ENERGY	702-227-2929

SHEET KEY

SS-2

CONSTRUCTION NOTES

- 2.01 "OB1" 10+61.37 CONSTRUCT 60" MANHOLE, 5.50' RT (RIM ELEV= 2431.2'±, INV ELEV= 2412.24', H = 18.96'). INSTALL 15" X 50' PVC FROM "OB1" 10+61.37, 5.50' RT (UIE= 2412.24') TO "CEN" 9+64.14 (LIE= 2412.11'). CONNECT TO 72" MANHOLE.
- 2.02 "OB1" 11+75.00 CONSTRUCT 60" MANHOLE, 5.50' RT (RIM ELEV= 2433.3'±, INV ELEV= 2412.71', H = 20.59'). INSTALL 15" X 115' PVC FROM "OB1" 11+75.00, 5.50' RT (UIE= 2412.71') TO "OB1" 10+61.37 (LIE= 2412.44'). CONNECT TO 60" MANHOLE.
- 2.03 "OB1" 13+00.00 CONSTRUCT 60" MANHOLE, 5.50' RT (RIM ELEV= 2435.7'±, INV ELEV= 2413.21', H = 22.49'). INSTALL 15" X 126' PVC FROM "OB1" 13+00.00, 5.50' RT (UIE= 2413.21') TO "OB1" 11+75.00 (LIE= 2412.91'). CONNECT TO 60" MANHOLE.
- 2.04 "OB1" 16+50.00 CONSTRUCT 60" MANHOLE, 16.81' RT (RIM ELEV= 2436.9'±, INV ELEV= 2414.25', H = 22.65'). INSTALL 15" X 352' PVC FROM "OB1" 16+50.00, 16.81' RT (UIE= 2414.25') TO "OB1" 13+00.00 (LIE= 2413.41'). CONNECT TO 60" MANHOLE.
- 2.05 "OB1" 16+59.84 CONSTRUCT 15" X 10' PVC STUB AND CAP PER DCSWCS 2.3.5 (UIE= 2414.48') TO "OB1" 16+50.00 (LIE= 2414.45'). CONNECT TO 60" MANHOLE

APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES

PROJECT NO. 136515 FIRST APPROVED DATE: 8-21-19

CITY OF LAS VEGAS

OSO BLANCA SEWER EXTENSION

SEWER PLAN AND PROFILE

"OB1" 10+00.00 to "OB1" 18+00.00

SS-2

05 OF 08

307V1166

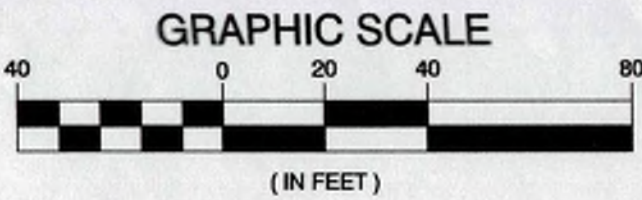
LOUIS BERGER

444 East Warm Springs Road, Ste 118

Las Vegas, Nevada 89119

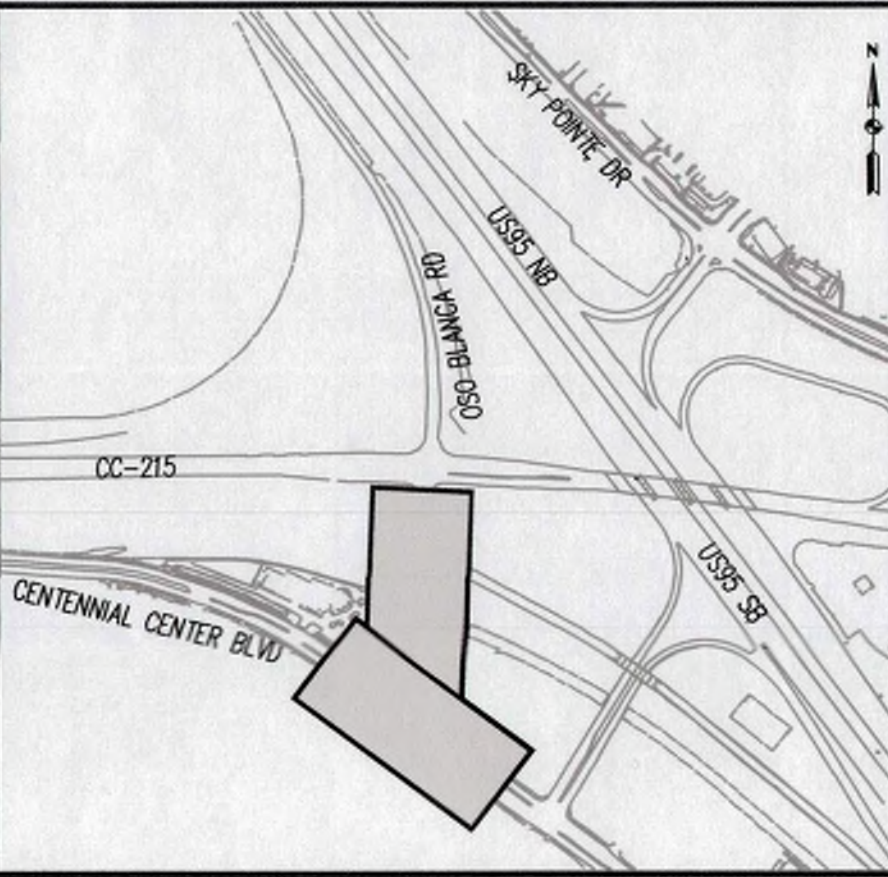
Phone: 702.756.6632 - Fax: 702.407.305

NOTE:
ALL EXISTING FACILITIES SHALL BE
PROTECTED IN PLACE UNLESS
OTHERWISE NOTED



CALL BEFORE CONSTRUCTION

BEFORE YOU DIG	USA NORTH	811 OR 800-227-2600
	F.A.S.T.	702-432-5300
BEFORE YOU UNDERGROUND	CLARK COUNTY TRAFFIC OPERATIONS	702-455-7511
	CITY OF LAS VEGAS T.E.F.O.	702-229-6611
BEFORE YOU OVERHEAD	NV ENERGY	702-227-2929



SHEET KEY

LEGEND

- LIMITS OF 2" MILL & OVERLAY
- LIMITS OF 5.5" PLANT MIX BITUMINOUS PAVEMENT OVER 4.5" TYPE II AGGREGATE BASE.

CONSTRUCTION NOTES

- RECONSTRUCT SIDEWALK RAMP (CASE 1) PER USDCCA DWG. 235 (A = 8.00', B = 8.00') AND CLV TOWN CENTER DEVELOPMENT STANDARDS.
- ADJUST WATER VALVE BOX TO FINISH GRADE PER UDACS PLATE #39. VALVE SHALL BE ACCESSIBLE AT ALL TIMES.

REMOVAL NOTES

- REMOVE AND RESET FENCE.
- REMOVE AND RESET STREET SIGN.
- REMOVE SIDEWALK RAMP.
- REMOVE AND RECONSTRUCT CROSS GUTTER PER USDCCA DWG. 228.

- NOTES:
- SEE NDOT PLANS FOR HORIZONTAL CONTROL.
 - ALL EXISTING UTILITIES ARE TO BE PROTECTED IN PLACE UNLESS OTHERWISE NOTED.
 - PROTECT IN PLACE AND ADJUST ALL LVVWD EXISTING FACILITIES TO FINISHED GRADE PER UDACS. ALL LVVWD FACILITIES SHALL BE ACCESSIBLE AT ALL TIMES.

APPROVED FOR CONSTRUCTION

Jeffrey S. Douglas
LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES
PROJECT NO. 136515 FIRST APPROVED DATE: 8-27-19

PREPARED FOR
CITY OF LAS VEGAS

OSO BLANCA SEWER EXTENSION

TITLE

SHEET

RC-1

06 OF 08

DRAWING NO. 307V1156

DESIGNED BY: LDN

DRAWN BY: FME

CHECKED BY: JSD

DATE: 07/30/2019

SUBMITTAL STAGE: FINAL

H# 60223

PREPARED BY: Louis Berger

444 East Warm Springs Road, Ste 118
Las Vegas, Nevada 89119
Phone: 702.736.6632 Fax: 702.737.3905

REVISIONS

NO. DATE

PROJECT NO. 136515A OS/125-21-SW

3. ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE DESIGN AND CONSTRUCTION STANDARDS FOR WASTEWATER COLLECTION SYSTEMS AND THE UNIFORM STANDARD SPECIFICATIONS FOR PUBLIC WORKS' CONSTRUCTION OFF-SITE IMPROVEMENTS, CLARK COUNTY AREA, NEVADA, AS AMENDED. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO BE AWARE OF THE CONTENTS OF THE ABOVE SPECIFICATIONS.
2. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PERFORM CONSTRUCTION AS PER PLANS. ANY ADDITIONS, DELETIONS, OR CHANGES SHALL FIRST MEET WITH THE APPROVAL OF THE CITY ENGINEER.
3. CHISEL "S" OR "G" IN CURBS WHERE SEWER OR GAS LATERALS PASS UNDER THE CURB.
4. POLYVINYL (PVC) SEWER PIPE SHALL MEET ASTM D-3034 SDR 35 SPECIFICATIONS, INSTALLED WITH SAND BEDDING AND BACKFILL OF TYPE II AGGREGATE BASE.
5. ALL MANHOLES PAVED IN STREETS EIGHTY (80') FOOT R/W AND LARGER SHALL HAVE CONCRETE COLLARS. STREETS LESS THAN EIGHTY (80') FOOT R/W WILL REQUIRE RETROFIT IF PAVING DOES NOT CONFORM TO CITY STANDARDS AT THE MANHOLE.
6. TEE SADDLES SHALL BE USED TO CONNECT SEWER LATERALS TO EXISTING MAIN LINES UP TO TWELVE INCH (12") DIAMETER. CONNECTIONS TO FIFTEEN INCH (15") OR LARGER MAINS SHALL REQUIRE SPECIAL PROCEDURES. IN LINE "Y" 'S SHALL BE USED ON LINES TWELVE INCHES (12") OR ABOVE.
7. WATER MAINS SHALL BE PROTECTED IN ACCORDANCE WITH LVWWD STANDARDS WHENEVER A SEWER MAIN CROSSES OVER A WATER MAIN OR THE SEWER IS LESS THAN EIGHTEEN INCH (18") UNDER A WATER MAIN.
8. ALL CONTRACTORS INSTALLING SEWER MAINS THAT WILL BE UNDER THE JURISDICTION OF THE CITY OF LAS VEGAS MUST BE STATE OF NEVADA CLASS "A" CONTRACTORS.
9. THE CITY OF LAS VEGAS WILL NOT ACCEPT ANY SEWER MAINS WHICH HAVE A VERTICAL DEFLECTION OF MORE THAN ONE TENTH (0.1) OF A FOOT FROM THE APPROVED CONSTRUCTION PLANS AT ANY LOCATION. SEWER MAINS FOUND TO EXCEED THIS TOLERANCE WILL HAVE TO BE REPAIRED OR REMOVED OR REPLACED TO THE SATISFACTION OF THE CITY ENGINEER PRIOR TO ACCEPTANCE BY THE CITY OF LAS VEGAS.
10. INSTALLATION OF CURVED SEWERS REQUIRES THE USE OF C-900 PVC PIPE WHICH ALLOWS FOR PIPE DEFLECTION AT THE JOINTS.

THE CONTRACTOR OR SUBCONTRACTOR PERFORMING THE BYPASS PUMPING WORK ON THIS PROJECT SHOULD HAVE AN "A" (GENERAL ENGINEERING) CLASSIFICATION LICENSE OR "A-15" (SEWERS, DRAINS, AND PIPES) CLASSIFICATION LICENSE.

2. THE QUANTITY OF SEWAGE TO BE BYPASSED SHALL BE THE SUM OF ALL FLOWS ENTERING THE PIPELINE BEFORE THE POINT OF DISCHARGE. THE CONTRACTOR SHALL DETERMINE FLOW DATA NOT AVAILABLE OR NOT SHOWN.

3. CONTRACTOR SHALL PROVIDE LABOR, MATERIALS, AND SUPERVISION TO TEMPORARILY BYPASS FLOW DURING RELOCATION OF THE SANITARY SEWER.

4. THE CONTRACTOR SHALL PROVIDE A DETAILED BYPASS PUMPING PLAN, PREPARED AND SEALED BY A NEVADA LICENSED PROFESSIONAL ENGINEER, THAT DESCRIBES THE MEASURES TO BE USED TO CONTROL FLOWS. THE BYPASS PUMPING PLAN SHALL BE SUBMITTED TO AND APPROVAL OBTAINED FROM THE ENGINEER PRIOR TO BEGINNING BYPASS PUMPING WORK.

5. CONTRACTORS PLAN SHALL INCLUDE, BUT NOT BE LIMITED TO THE FOLLOWING:

- A. DRAWINGS INDICATING THE SCHEME AND LOCATION OF PUMPS, SUCTION MANHOLE, SUCTION PIPING, DISCHARGE MANHOLE, DISCHARGE PIPING, TEMPORARY SEWER PULPS, FLOW DIVERSION STRUCTURES, DAMS, ODOOR CONTROL, AND RELATED MATERIALS AND EQUIPMENT FOR EACH BYPASS PUMPING SITE. THE NUMBER AND SIZE OF PUMPS USED IN BYPASS PUMPING SHALL BE SUCH THAT IF THE LARGEST PUMP IS OUT OF SERVICE, BYPASS FLOWS WILL BE MAINTAINED DURING THE BYPASS OPERATION.
- B. PLAN SHALL SHOW LOCATION OF BYPASS PUMPING SYSTEM, INCLUDING ODOOR CONTROL, AND SHALL DISCUSS PHASING, REUSE, AND MOVEMENT OF SYSTEMS DURING CONSTRUCTION AS APPLICABLE.
- C. BYPASS PUMPING PLAN SHALL DESIGNATE WHICH SYSTEM/SETUP WILL BE USED WHERE AND WHEN AVAILABLE.
- D. PUMPS AND BYPASS LINES SHALL BE OF ADEQUATE CAPACITY AND SIZE TO HANDLE THE PEAK FLOW.
- E. BYPASS LINES, FITTINGS, AND ALL ACCESSORIES SHALL WITHSTAND TWICE THE MAXIMUM PRESSURE OF THE SYSTEM OR 50 PSI, WHICHEVER IS GREATER.
- F. STRUCTURES AND EQUIPMENT WITHIN THE PUBLIC RIGHT-OF-WAY SHALL BE IDENTIFIED AS SUCH ON THE PLANS.
- G. CAPACITIES AND SIZES OF PUMPS, STANDBY EQUIPMENT, AND POWER REQUIREMENTS IF APPLICABLE.
- H. KEY OPERATIONAL CONTROL FACTORS (E.G., MAXIMUM FLOW ELEVATIONS UPSTREAM OF DAMS).
- I. DESIGN CALCULATIONS PROVING ADEQUACY OF THE SYSTEM AND SELECTED EQUIPMENT, INCLUDING STATIC LIFT, FRICTION LOSSES, FRICTION LOSSES, FLOW VELOCITY, PUMP CURVES IDENTIFYING OPERATING RANGE AND DUTY POINT, AND PIPE THICKNESS CALCULATIONS. PIPE THICKNESSES CALCULATIONS SHALL ASSUME AN H2O LINE LOADING AT CROSSINGS.
- J. SEWER PLUGGING METHOD AND TYPE OF PLUG.
- K. METHOD OF NOISE CONTROL FOR EACH PUMP AND GENERATOR.
- L. THRUST RESTRAINT BLOCK SIZES AND LOCATIONS WHERE SPACE IS LIMITED.
- M. METHOD OF SECURING AND BRACING OF SEWER PLUG SHALL BE SUBMITTED. AT A MINIMUM, THE PLUG MUST ATTACH TO A CABLE/CHAIN, WHICH IS THEN CONNECTED/TIED OFF TO AN IMMOBILE OBJECT, AS APPROVED BY THE ENGINEER.
- N. TEMPORARY PIPE SUPPORTS AND ANCHORING REQUIRED.
- O. STANDBY PUMP PLAN INCLUDING NAME AND QUALIFICATIONS FOR ON-SITE OPERATORS. TRAINED BYPASS PUMPING PERSONNEL (PUMP OPERATOR) SHALL BE PRESENT DURING THE ENTIRE BYPASS OPERATION. LOGS SHALL BE MAINTAINED BY THE BYPASS PUMPING PERSONNEL. SUBMIT BYPASS PUMPING PERSONNEL QUALIFICATIONS FOR ENGINEERS REVIEW AND APPROVAL.
- P. ODOOR CONTROL SYSTEM MANUFACTURER INFORMATION.
- Q. SITE LAYOUT SHOWING ALL MAJOR COMPONENTS.
- R. WET WEATHER EVENT PROCEDURES.
- S. AN EMERGENCY RESPONSE PLAN THAT ADDRESSES CONTAINMENT, NOTIFICATION PROCEDURES, AND EQUIPMENT FAILURE PROCEDURES. AN EMERGENCY CONTACT LIST WITH 24-HOUR PHONE NUMBERS SHALL BE SUBMITTED AND UPDATED AS NEEDED.
- T. SCHEDULE INCLUDING DURATIONS AND DATES FOR EACH SEQUENCE.
- U. PROTECTION METHOD FOR EXISTING UTILITIES.

6. THE CONTRACTOR SHALL PREPARE A TRAFFIC CONTROL PLAN FOR THE BYPASS EQUIPMENT AND PIPING IN ACCORDANCE WITH SECTION 824 "ACCOMMODATIONS FOR PUBLIC TRAFFIC". BUSINESS ACCESS, EMERGENCY VEHICLE ACCESS, PEDESTRIAN ACCESS, AND HANDICAPPED ACCESSIBLE ROUTES MUST BE MAINTAINED.

7. THE CONTRACTOR'S BYPASS PLAN MUST CONSIDER EXISTING SPEED LIMITS AND ALLOWABLE REDUCTIONS IN DETERMINING THE LOCATION OF PIPING AND REDUCE SPEED AT EACH LOCATION WHERE THE PIPING CROSSES PERPENDICULAR TO LANES OF TRAFFIC BY 10 MPH.

8. REQUIREMENTS FOR TEMPORARY BYPASS PUMPING WITHIN CITY OF LAS VEGAS (CLV) RIGHTS-OF-WAY FOR PURPOSES OF INSTALLING BYPASS EQUIPMENT INCLUDING, BUT NOT LIMITED TO, BYPASS PIPING SHALL COMPLY WITH THE REQUIREMENTS OF CLV. CLV PERMIT REQUIREMENTS APPLY.

9. THE CONTRACTOR SHALL HAVE THE ENTIRE BYPASSING SYSTEM IN PLACE AND TESTED BEFORE BYPASSING ANY SEWAGE. THE TESTING PROUDURE SHALL BE AS FOLLOWS:

- A. THE TEST SHALL RUN FOR A PERIOD OF 24 HOURS.
- B. THE CONTRACTOR SHALL FILL THE LINE WITH WATER.
- C. THE LINE SHALL BE SEALED ON THE DISCHARGE END.
- D. THE CONTRACTOR SHALL PRESSURIZE THE LINE TO TWICE THE MAXIMUM PRESSURE OF THE SYSTEM OR 50 PSI WHICHEVER IS GREATER.
- E. THE CONTRACTOR SHALL WALK THE LINE EVERY HOUR AND KEEP A LOG OF THE FINDINGS. THE LINE MAY BE PUT IN SERVICE IF AFTER THE 24-HOUR PERIOD THE PRESSURE HAS BEEN MAINTAINED AND THERE ARE NO OBSERVABLE LEAKS.

10. THE CONTRACTOR SHALL NOTIFY THE ENGINEER 48 HOURS PRIOR TO SHUTTING DOWN OR BYPASSING ANY OF THE PIPELINES.

11. THE BYPASSED FLOW SHALL BE CONTINUOUSLY METERED AND FLOW MONITORING RESULTS SUBMITTED TO THE ENGINEER WHEN BYPASS PUMPING HAS BEEN COMPLETED. BYPASS EQUIPMENT SHALL BE CONTINUOUSLY MONITORED TO ENSURE PROPER OPERATION AT ALL TIMES.

12. FOR PURPOSES OF BYPASS PUMPING LATERAL FLOWS, RIGHT OF ENTRY ONTO PRIVATE PROPERTY IS NOT PERMITTED WITHOUT PROPERTY OWNER PERMISSION. CONTRACTOR SHALL BE RESPONSIBLE TO ACQUIRE THIS PERMISSION. LATERALS SHOWN ON DRAWINGS ARE FROM BEST AVAILABLE DOCUMENTS. INTERNAL INSPECTION MAY IDENTIFY ADDITIONAL LATERALS NOT SHOWN ON THE DRAWINGS THAT MAY REQUIRE BYPASS PUMPING.

13. CONTRACTOR SHALL MAINTAIN ONSITE SUFFICIENT EQUIPMENT AND MATERIALS TO ENSURE CONTINUOUS AND SUCCESSFUL OPERATION OF THE BYPASS AND DEWATERING SYSTEMS.

- A. THE CONTRACTOR SHALL HAVE REDUNDANT BYPASS PUMPS, GENERATOR AND PIPE ON SITE, MANIFOLD, CONNECTED AND READY TO OPERATE IMMEDIATELY.
- B. THE CONTRACTOR SHALL HAVE STANDBY PUMPS ON SITE FOR 100% REDUNDANCY OF THE BYPASS SYSTEM DESIGN FLOW OR PEAK FLOW, WHICHEVER IS GREATER.
- C. STANDBY PUMPS SHALL BE PLUMBED, FLOWED AND OPERATIONAL AT ALL TIMES.
- D. THE CONTRACTOR SHALL MAINTAIN ON SITE A SUFFICIENT NUMBER OF VALVES, TEES, ELBOWS, CONNECTIONS, TOOLS, SEWER PULPS, PIPING, AND OTHER PARTS OR SYSTEM HARDWARE TO ENSURE IMMEDIATE REPAIR OR MODIFICATION OF ANY PART OF THE SYSTEM AS NECESSARY.
- E. IN ORDER TO DETERMINE BYPASS PIPE CAPACITY, THE CONTRACTOR SHALL USE A MAXIMUM VELOCITY OF 10 FEET/SECOND.
- F. ALL PUMPS, GENERATORS, AND OTHER EQUIPMENT SHALL BE PLACED ON A NEW CONTAINMENT UNIT TO PROTECT AGAINST SPILLS OF PETROLEUM PRODUCTS USED BY THE EQUIPMENT.

14. IT IS ANTICIPATED THAT THE WORK MAY BE PERFORMED DURING THE MONTHS WHEN THE LAS VEGAS VALLEY EXPERIENCES MONSOON SEASONAL RAIN EVENTS. IT IS LIKELY THAT THESE EVENTS WILL INFLUENCE THE QUANTITY OF FLOW IN THE SEWER LINES.

15. NO BYPASSING TO THE GROUND SURFACE, RECEIVING WATERS, STORM DRAINS, OR BYPASSING THAT RESULTS IN SOIL OR GROUNDWATER CONTAMINATION OR ANY POTENTIAL HAZARD DRAINS SHALL BE PERMITTED.

16. IN THE EVENT OF ANY SEWAGE SPILL, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROMPT CLEAN-UP AND DISINFECTION OF THE SPILL AS CALLED FOR IN HIS SPILLAGE CLEANUP PLAN. THE CONTRACTOR IS REQUIRED TO IMMEDIATELY NOTIFY THE ENGINEER IN THE EVENT OF ANY SEWAGE SPILL PER THE EMERGENCY RESPONSE PLAN.

17. THE CONTRACTOR SHALL COMPENSATE THE OWNER FOR THE COST OF ANY FINES LEVIED AS THE RESULT OF A SPILL OR UNAUTHORIZED DISCHARGE.

18. THE CONTRACTOR SHALL INSPECT THE ENTIRE BYPASS PUMPING AND PIPING SYSTEM FOR LEAKS OR SPILLS ON AN HOURLY BASIS.

19. FOR INTERNAL PIPELINE BYPASSES, THE CONTRACTOR SHALL INSPECT PULPS AND/OR OTHER DIVERSION METHODS (GATES, STOP LOGS, ETC.) TO ENSURE SEAL ON A DAILY BASIS. THE CONTRACTOR WILL ALSO INSPECT THE NEXT THREE (3) MANHOLES ON THE BYPASS PIPELINE DOWNSTREAM OF THE INTERNAL DIVERSION LOCATION DURING THE PEAK FLOW TIMEFRAME TO ENSURE NO SURCHARGING IS OCCURRING ON A DAILY BASIS. THE ENGINEER MAY REQUIRE ADDITIONAL INSPECTION FARTHER DOWNSTREAM IN THE BYPASS PUMPING PLAN.

20. THE CONTRACTOR SHALL CREATE AN INSPECTION LOG AND SHALL ENTER THE TIME OF THE INSPECTIONS, THE CONDITION OF THE PIPING, AND THE NAME OF THE INSPECTOR INTO THE LOG FOR REVIEW BY THE ENGINEER.

21. THE BYPASS PUMPING SYSTEM SHALL BE CLEANED AND DISINFECTED PRIOR TO BEING DISMANTLED.

- A. THE CONTRACTOR SHALL ALTERNATE FLUSHING AND PURGING OF THE SYSTEM TO REMOVE ALL LOOSE MATERIAL.
- B. AFTER THE CONTRACTOR HAS CLEANED THE PIPE, AND PRIOR TO DISMANTLING THE PIPING, THE CONTRACTOR SHALL DISINFECT THE PIPE WITH 10% CHLORINE AND WATER SOLUTION.

22. UPON COMPLETION OF BYPASS PUMPING OPERATION, CLEAN DISTURBED AREAS, RESTORING TO ORIGINAL CONDITION, INCLUDING, BUT NOT LIMITED TO, PAVEMENT RESTORATION, RESTORATION OF THE STRIPING AND TRAFFIC CONTROL DEVICES, LANDSCAPING, AND PRIVATE PROPERTY IMPROVEMENTS RESTORATION, AT LEAST EQUAL TO THAT WHICH EXISTED PRIOR TO START OF WORK.
23. THE BYPASSING SYSTEM SHALL NOT BE SHUT DOWN BETWEEN SHIFTS, ON HOLIDAYS OR WEEKENDS, OR DURING WORK STOPPAGES WITHOUT WRITTEN PERMISSION FROM THE ENGINEER.
24. THE BYPASS SYSTEM SHALL HAVE A TRAINED AND QUALIFIED ATTENDANT 24 HOURS PER DAY, 7 DAYS PER WEEK, WHOSE ONLY DUTY IS TO MAINTAIN THE BYPASS PUMPING SYSTEM UNTIL THE BYPASSING OF THE SPECIFIC PIPELINE IS NO LONGER REQUIRED. THE ATTENDANT SHALL BE QUALIFIED TO BOTH OPERATE AND REPAIR ANY AND ALL PROBLEMS THAT MAY OCCUR.
25. THE ATTENDANT SHALL HAVE A CELLULAR PHONE FOR COMMUNICATION BETWEEN THE ENGINEER, OWNER, AND THE SITE IN THE EVENT OF EMERGENCIES. THE CELLULAR PHONE NUMBER SHALL BE PROVIDED TO THE ENGINEER AT THE BEGINNING OF THE PROJECT.
26. THE OWNER MAY ALLOW DIVERSION OF SEWER FLOW THAT WILL REDUCE THE AMOUNT ENTERING THE SYSTEM. THE CONTRACTOR SHALL OBTAIN PERMITS FROM THE OWNER IN ORDER TO INSTALL PLUGS AND PUMPS AND OTHER EQUIPMENT AT SPECIFIED LOCATIONS TO ACCOMPLISH THE DIVERSIONS.