STANFORD WAY SANITARY SEWER CIPP LINING

SPARKS, NEVADA

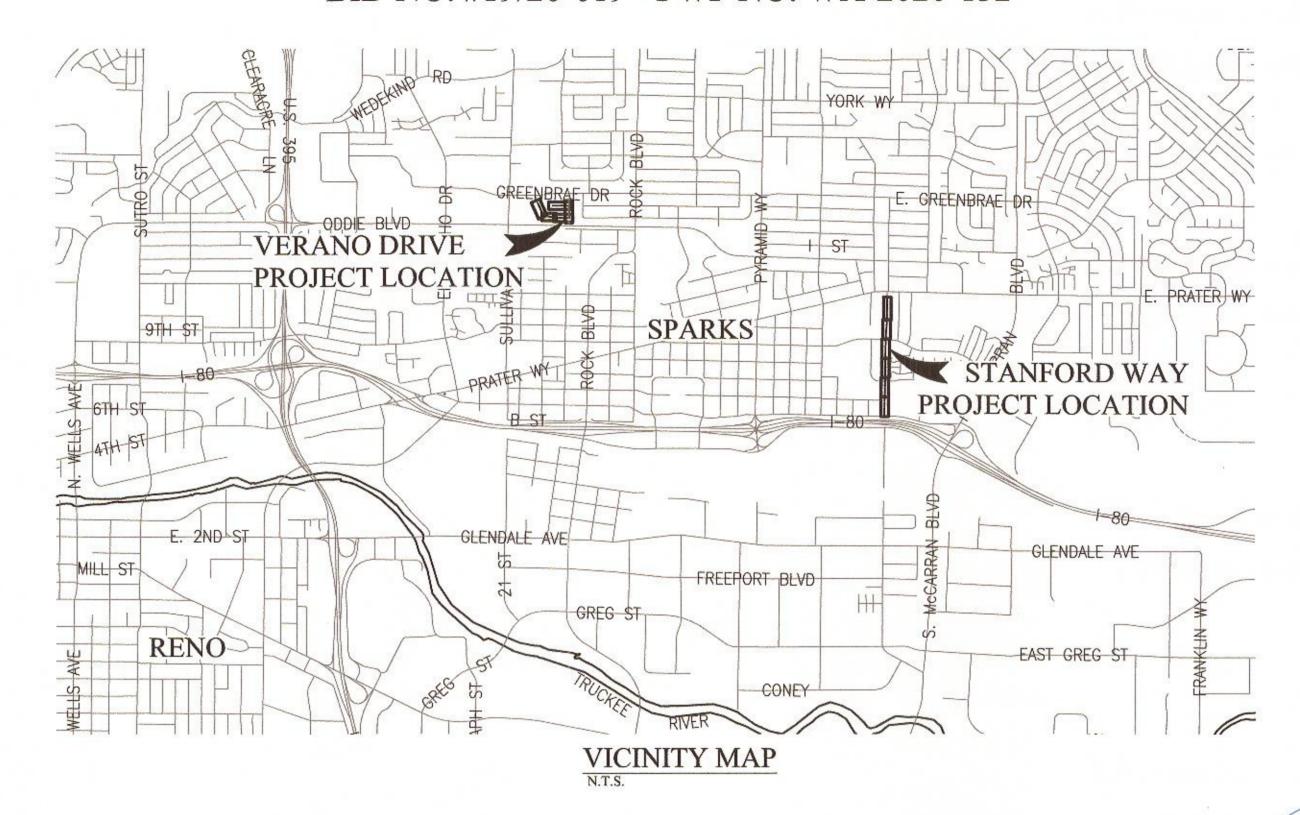
BID NO. #19/20-019 - PWP NO. WA-2020-132

OWNER:

CITY OF SPARKS 431 PRATER WAY P.O. BOX 857 SPARKS, NV 89431-0857 PHONE: (775) 353-2273 FAX: (775) 353-2399

ENGINEER/SURVEYOR:

FARR WEST ENGINEERING 5510 LONGLEY LANE **RENO NV 89511** PHONE: (775) 851-4788 FAX: (775) 851-0766



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JON R. ERICSON, P.E., P.T.O.E. CITY ENGINEER

DATE

CITY OF SPARKS

RONALD E. SMITH DONALD ABBOTT **ED LAWSON** PAUL ANDERSON **CHARLENE BYBEE** KRISTOPHER DAHIR NEIL C. KURTZ

MAYOR COUNCIL MEMBER WARD **COUNCIL MEMBER WARD 2 COUNCIL MEMBER WARD 3 COUNCIL MEMBER WARD 4 COUNCIL MEMBER WARD 5 CITY MANAGER**



BID SET

BASIS OF BEARINGS

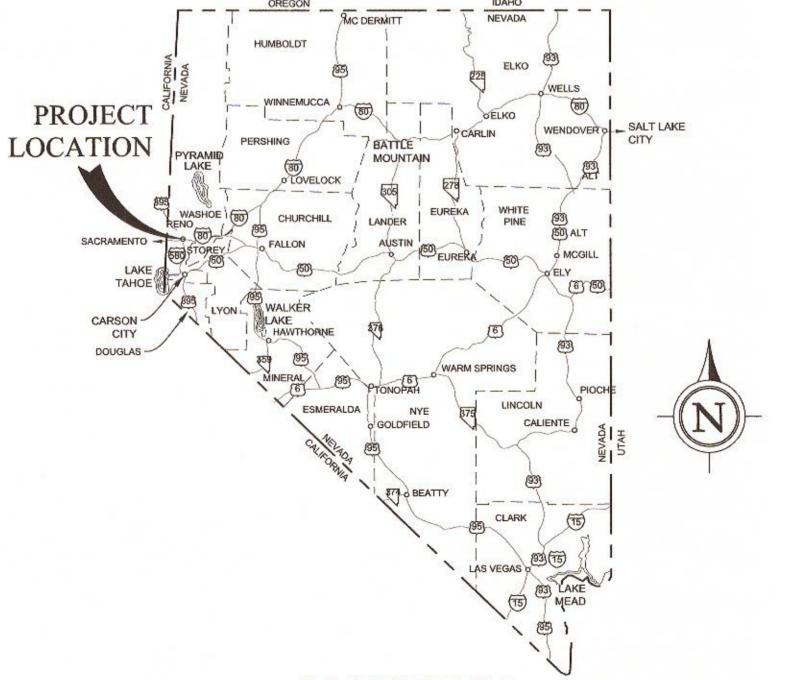
NEVADA STATE PLANE COORDINATE SYSTEM, WEST ZONE, NORTH AMERICAN DATUM OF 1983/1994, HIGH ACCURACY REFERENCE NETWORK (NAD 83/94-HARN), AS DETERMINED USING REAL TIME KINEMATIC (RTK) GPS OBSERVATIONS WITH CORRECTIONS TRANSMITTED BY THE NORTHERN NEVADA COOPERATIVE REAL TIME NETWORK GPS (NNCRN GPS). THE BEARING BETWEEN GPS REFERENCE STATION "WWRF" - S11SM15000 AND WASHOE COUNTY CONTROL POINT "SBM 82" -N53SM01211 AND IS TAKEN AS NORTH 60°40'43" WEST. ALL DIMENSIONS SHOWN ARE GRID DISTANCES. COMBINED GRID-TO-GROUND FACTOR=1.000197939.

BASIS OF ELEVATION

THE BASIS OF ELEVATION IS BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88) AS TAKEN FROM THE CITY OF SPARKS 2000 GEODETIC CONTROL NETWORK RECORD OF SURVEY 3885, RECORDED ON FEBRUARY 7, 2001 AS FILE 2522263, FILED IN THE OFFICIAL RECORDS OF WASHOE COUNTY, NEVADA, MONUMENT "BM 82" WITH A PUBLISHED ELEVATION OF 4399.76 FT. CITY OF SPARKS BENCHMARK "BM 82" IS DESCRIBED AS BEING A DRIVE RIVET AND 2-INCH ALUMINUM WASHER IN THE TOP OF THE CURB, 3 FEET NORTH OF THE NORTH CURB RETURN AT THE NORTHEAST CORNER OF VICTORIAN AVENUE AND NORTH MCCARRAN BOULEVARD ON NORTH MCCARRAN BOULEVARD.



FARR WEST ENGINEERING ASSUMES NO RESPONSIBILITY FOR EXISTING UTILITY LOCATIONS AND ELEVATIONS. THE UTILITIES SHOWN ON THESE DRAWINGS HAVE BEEN PLOTTED FROM THE BEST AVAILABLE INFORMATION. IT IS, HOWEVER, THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE LOCATION AND ELEVATION OF ALL UTILITIES PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION. CONTRACTOR TO FIELD VERIFY ALL EXISTING SITE CONDITIONS PRIOR TO CONSTRUCTION. IF A CONFLICT EXISTS BETWEEN WHAT IS SHOWN ON THESE DRAWINGS AND WHAT EXISTS IN THE FIELD, THE CONTRACTOR IS TO NOTIFY THE ENGINEER IMMEDIATELY.



LOCATION MAP

SHEET NUMBER G1

1 OF 12

SHEET

CITY OF S SANITAI

2. THE CONTRACTOR SHALL CALL THE CITY OF SPARKS PUBLIC WORKS FORTY-EIGHT (48) HOURS PRIOR TO THE START OF CONSTRUCTION, REQUIRED INSPECTIONS, AND TESTING.

 MODIFICATIONS TO THE APPROVED PLANS REQUIRE REVIEW AND APPROVAL BY THE OWNER & ENGINEER. WORK PERFORMED WITHOUT WRITTEN APPROVAL WILL REQUIRE REMOVAL AT THE CONTRACTORS EXPENSE.

4. THE APPROVED PLANS, PERMITS AND INSPECTION RECORDS MUST BE ON THE JOB SITE AT ALL TIMES.

5. OUTSIDE OF AN UNFORESEEN CIRCUMSTANCE SEWER MAIN SHUTDOWNS/INTERRUPTION OF SERVICE IS NOT PERMITTED UNLESS APPROVED BY OWNER AND ENGINEER AND PROPER NOTIFICATIONS ARE PROVIDED. OWNER APPROVAL IS REQUIRED 48 HOURS PRIOR TO NOTIFICATION OF CUSTOMERS. RESIDENTIAL CUSTOMERS SHALL RECEIVE 48 HOURS WRITTEN NOTICE. THE OWNER IS RESPONSIBLE FOR THE NOTIFICATION WHEN WORK IS PERFORMED BY THE OWNER. THE CONTRACTOR IS RESPONSIBLE IN ALL OTHER CASES. A LIST SHALL BE KEPT BY THE RESPONSIBLE PARTY LISTING THE DATE, TIME, AND ADDRESS OF ALL PERSONS NOTIFIED. THE CONTRACTOR WILL BE SUBJECT TO DAMAGE CLAIMS SHOULD THEY FAIL TO NOTIFY CUSTOMERS OR MAINTAIN DOCUMENTATION OF NOTIFICATION OF CUSTOMERS. THE CONTRACTOR SHALL NOT OPERATE ANY EXISTING WATER VALVES WITHOUT AUTHORIZATION OF THE UTILITY OWNER

6. PURSUE WORK IN A CONTINUOUS AND DILIGENT MANNER CONFORMING TO ALL PERTINENT SAFETY REGULATIONS TO ENSURE A TIMELY COMPLETION OF THE PROJECT.

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

8. 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. CONTRACTOR SHALL STORE/CONTAIN, HANDLE AND TRANSPORT HAZARDOUS OR FLAMMABLE MATERIALS TO MINIMIZE THE POTENTIAL FOR SPILLS, FIRES OR EXPLOSIONS. STORAGE/CONTAINMENT, HANDLING AND TRANSPORT OF HAZARDOUS OR FLAMMABLE MATERIALS SHALL BE IN ACCORDANCE WITH LOCAL, STATE OR FEDERAL REQUIREMENTS.

9. CONTRACTOR SHALL MAINTAIN AND OPERATE EQUIPMENT IN A MANNER TO MINIMIZE THE POTENTIAL FOR SPILLS. SPILLS OF HAZARDOUS OR FLAMMABLE MATERIALS SHALL BE IMMEDIATELY REPORTED TO THE OWNER OR OWNER REPRESENTATIVE.

10. CONTRACTOR SHALL OPERATE VEHICLES IN ACCORDANCE WITH STATE AND LOCAL REQUIREMENTS. VEHICLE AND EQUIPMENT OPERATORS SHALL BE PROPERLY LICENSED AND TRAINED.

11. VEHICLE ACCIDENTS, INJURIES, SPILLS OR OTHER INCIDENTS SHALL BE IMMEDIATELY REPORTED TO THE OWNER OR OWNER REPRESENTATIVE.

12. ROAD SHOULDERS MAY NOT BE UTILIZED FOR OVERNIGHT EQUIPMENT AND MATERIALS STORAGE, BUT MAY BE USED FOR THE APPLICABLE SECTION OF EACH DAY'S WORK. A LAYDOWN YARD MAY BE AVAILABLE ON 4TH STREET ACROSS FROM WRIGHT WAY, CONTRACTOR SHOULD ENQUIRE WITH THE CITY OF SPARKS. CONTRACTOR SHALL BE RESPONSIBLE FOR THE SECURITY OF ALL EQUIPMENT AND MATERIALS. CONTRACTOR MAY OBTAIN PERMISSIONS TO STAGE AT OTHER LOCATIONS ON OWN ACCORD.

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

14. THE CONTRACTOR SHALL UTILIZE CONSTRUCTION TECHNIQUES TO MINIMIZE GRADING, VEGETATION REMOVAL, AND SURFACE DISTURBANCE. CONTRACTOR WILL BE RESPONSIBLE FOR THE RESTORATION OF ALL LANDSCAPING, SOD, CURBS, ASPHALT, DRIVEWAY PAVERS, RIP RAP, RETAINING WALLS, IRRIGATION PIPING AND LANDSCAPE LIGHTING TO EQUAL OR BETTER THAN EXISTING CONDITION. ALL COST FOR RESTORATION WILL BE INCLUDED IN THE APPLICABLE BID ITEM.

15. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OF ALL MATERIALS TO BE USED ON THE SITE TO INCLUDE, BUT NOT BE LIMITED TO, A.C. MIX DESIGN, AGGREGATE BASE QUALIFICATIONS, PIPE BEDDING, PIPING, AND CIPP PRODUCTS PER SPECIFICATION SECTIONS 306D AND 306E TO THE PROJECT ENGINEER FOR APPROVAL PRIOR TO THE MANUFACTURER OR USE OF SUCH ITEMS.

16. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VISIT AND MAKE OWN INTERPRETATIONS WITH REGARD TO MATERIALS, METHODS, AND EQUIPMENT NECESSARY TO PERFORM THE WORK REQUIRED FOR THIS PROJECT PRIOR TO BIDDING AND ORDERING MATERIALS.

17. ANY HAZARDOUS MATERIALS COLLECTED SHALL BE DISPOSED OF IN ACCORDANCE WITH ALL APPLICABLE HAZARDOUS MATERIALS LAWS AND REGULATIONS.

18. CONTRACTOR SHALL EXAMINE THE PROJECT WORK AREAS PRIOR TO BIDDING TO SATISFY HIMSELF AS TO THE NATURE AND EXTENT OF EXISTING SITE CONDITIONS THAT WILL BE ENCOUNTERED.

19. THE CONTRACTOR SHALL BE RESPONSIBLE FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY. THIS REQUIREMENT SHALL APPLY CONTINUOUSLY, AND NOT BE LIMITED TO NORMAL WORKING HOURS AND SUBJECT TO THE SPECIAL PROVISIONS OF THE CONTRACT.

20. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL EXCAVATING AND SHORING PROCEDURES AND CONFORM TO THE LATEST O.S.H.A. REQUIREMENTS.

21. THE CONTRACTOR SHALL OBTAIN AND PAY FOR ANY OTHER NECESSARY PERMITS AND FEES REQUIRED PRIOR TO BEGINNING WORK.

EROSION CONTROL NOTES

 BEST MANAGEMENT PRACTICES SHALL BE IN PLACE FOR DUST CONTROL, SEDIMENT CONTROL, AND EROSION CONTROL DURING CONSTRUCTION.

2. THE CONTRACTOR SHALL INCORPORATE ADEQUATE DRAINAGE PROCEDURES DURING THE CONSTRUCTION PROCESS TO ELIMINATE EXCESSIVE EROSION OR PONDING AND TO PROTECT ADJACENT IMPROVEMENTS AND PROPERTIES FROM AN INFLUX OF RUNOFF OR SEDIMENT.

3. SURPLUS OR WASTE MATERIAL AND/OR FILL OF EARTHEN MATERIAL SHALL NOT BE PLACED IN DRAINAGE WAYS.

4. ALL LOOSE PILES OF SOIL, SILT, CLAY, SAND, DEBRIS OR OTHER EARTHEN MATERIALS MUST BE PROTECTED IN A REASONABLE MANNER TO PREVENT THE DISCHARGE OF THESE MATERIALS TO WATERS OF THE STATE. THESE MATERIALS MUST BE REMOVED FROM THE SITE AT THE END OF EACH WORKING DAY.

5. IF NECESSARY, CONTRACTOR SHALL ENHANCE EROSION CONTROL MEASURES IN THE FIELD.

6. CONTRACTOR SHALL INSTALL SEDIMENT CONTROL DEVICES PRIOR TO CONSTRUCTION.

7. THE CONTRACTOR SHALL REMOVE ALL GRADING AND CONSTRUCTION DEBRIS AT THE END OF EACH WORKING DAY.

8. DEWATERING EFFLUENT SHALL BE TREATED PRIOR TO DISCHARGE BY MEANS OF DEWATERING STRUCTURES (e.g. STRAW BALE FILTER/SILT FENCE PIT, GRAVEL FILTER, ETC.).

DUST CONTROL NOTES:

 CONTRACTOR IS RESPONSIBLE FOR PREVENTING CONTROLLABLE FUGITIVE DUST FROM THE PROJECT'S DISTURBED AREAS TO BECOME AIRBORNE ON A 7-DAY/WEEK, 24-HOUR/DAY BASIS FROM COMMENCEMENT OF THE PROJECT TO FINAL COMPLETION.

2. REGULAR VACUUM OR SWEEPING OF PAVED SURFACES WHERE CONSTRUCTION IS OCCURRING WILL BE PERFORMED AT LEAST DAILY AND MORE OFTEN IF NECESSARY TO REMOVE DIRT OR WASTE RESULTING FROM THE CONSTRUCTION.

3. STOCKPILED EARTHEN MATERIALS SHALL BE REMOVED FROM THE SITE AT THE END OF EACH WORKING DAY.

4. ALL TRUCKS IMPORTING OR EXPORTING DIRT, ROCK OR OTHER FILL MATERIALS SHALL PREVENT SPILLAGE OR LOSS OF BULK MATERIAL FROM HOLES OR OTHER OPENINGS IN THE CARGO COMPARTMENT FLOOR, SIDES, AND/OR TAILGATE. ALL HAUL TRUCKS MUST BE COVERED WITH A TARP OR OTHER SUITABLE CLOSURE; OR BULK MATERIALS MUST CONTAIN ENOUGH MOISTURE AND/OR DUST SUPPRESSANT TO PREVENT FUGITIVE DUST EMISSIONS DURING TRANSPORT; OR LOAD ALL TRUCKS SUCH THAT THE FREEBOARD IS NOT LESS THAN SIX (6) INCHES.

5. ALL PROJECT RELATED VEHICLES SHALL PARK ON EXISTING PAVED SURFACES. CONTRACTOR SHALL MINIMIZE CONSTRUCTION RELATED VEHICLE AND EQUIPMENT EMISSIONS DURING CONSTRUCTION BY SHUTTING OFF EQUIPMENT AND VEHICLES NOT IN USE. IDLING OF DIESEL ENGINES SHALL BE KEPT AT A MINIMUM SO FAR AS PRACTICAL.

ACCESS/TRAFFIC CONTROL NOTES:

1. PROVIDE AND MAINTAIN ALL NECESSARY TRAFFIC CONTROL, THROUGHOUT CONSTRUCTION, IN ACCORDANCE WITH APPLICABLE PARTS OF SSPWC SECTION 332 AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, (MUTCD, LATEST EDITION).

2. THE CONTRACTOR SHALL MAINTAIN TRAFFIC CONTROL IN STRICT ACCORDANCE WITH PLANS AND SPECIFICATIONS AT ALL TIMES. ROADS WITHIN THE PROJECT MAY HAVE LIMITED SIGHT DISTANCE.

3. STREETS SHALL REMAIN OPEN TO LOCAL TRAFFIC AND ONE-WAY TRAFFIC SHALL BE PROVIDED AT ALL TIMES.

4. RESIDENCES SHALL HAVE ACCESS TO/FROM DRIVEWAY AT ALL TIMES. CONTRACTOR SHALL PROVIDE COORDINATION FOR ACCESS (TRENCH PLATE, MOVE EQUIPMENT, ETC.) WITH RESIDENCES.

5. TRAFFIC DELAYS SHALL BE HELD TO 10 MINUTES OR LESS.

6. CONTRACTOR SHALL BECOME FAMILIAR WITH THE SITE AND ACCESS TO THE SITE PRIOR TO BID.

7. CONTRACTOR SHALL DETERMINE BEST METHODS FOR ACCESS WHEN OFF HAULING WASTE, DELIVERY OF MATERIALS, AND DAY TO DAY ACTIVITIES.

8. TRAFFIC CONTROL PLANS TO BE SUBMITTED TO CITY OF SPARKS FOR REVIEW. SUBMIT TRAFFIC CONTROL PLANS TO:

NAME: ASHLEY ELSON
TEL: (775)353-2375

EMAIL: AELSON@CITYOFSPARKS.US
OFFICE LOCATION: SPARKS CITY HALL, 431 PRATER WAY, SPARKS, NV 89431

9. THE HOURS OF WORK SHALL BE FROM 7:00 AM TO 7:00 PM MONDAY THROUGH FRIDAY; WEEKEND WORK UPON APPROVAL BY CITY ENGINEER.

10. THE WORK OF SETTING UP AND TEARING DOWN TRAFFIC CONTROL DEVICES AS REQUIRED SHALL BE COMPLETED EACH DAY WITHIN THE HOURS SPECIFIED ON THE PERMIT AND/OR ON THE APPROVED TRAFFIC CONTROL PLAN. ALL TRAFFIC CONTROL DEVICES SHALL BE COMPLETELY REMOVED FROM THE ROADWAY AT THE END OF EACH WORKING DAY.

ASPHALT AND PAVING NOTES

1. TEMPORARY PAVEMENT SHALL MEET THE REQUIREMENTS OF THE SSPWC. THE CONTRACTOR SHALL MAINTAIN PAVEMENT IN A SAFE AND SMOOTH CONDITION UNTIL FINAL PAVEMENT CAN BE PLACED, TO THE SATISFACTION OF THE ENGINEER AND THE EXCAVATION AND ENCROACHMENT PERMIT.

2. PERMANENT ASPHALT CONCRETE PAVEMENT PATCH SHALL MEET THE REQUIREMENTS OF THE SSPWC, THE EXCAVATION AND ENCROACHMENT PERMITS, AND SHALL UTILIZE PG 64-28 NV MIX.

EXISTING UTILITY GENERAL NOTES

1. LOCATIONS OF EXISTING UTILITIES ARE APPROXIMATE AND DEPTHS ARE UNKNOWN. CONTRACTOR IS RESPONSIBLE FOR EXACT FIELD LOCATIONS.

 UTILITIES MAY EXIST THAT ARE NOT SHOWN ON THE PLANS. HORIZONTAL AND VERTICAL LOCATIONS OF EXISTING UTILITIES ARE APPROXIMATE ONLY. CONTRACTOR SHALL VERIFY ACTUAL LOCATIONS OF EXISTING UTILITIES PRIOR TO CONSTRUCTION. CONTRACTOR SHALL CALL UNDERGROUND SERVICES ALERT, USA, AT (1-800-227-2600) AT LEAST TWO (2) WORKING DAYS PRIOR TO ANY EXCAVATION.

3. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO POTHOLE EXISTING UTILITIES SURROUNDING THE AREA THAT HAVE THE POTENTIAL TO CONFLICT WITH THE PROPOSED WORK AND DETERMINE THE EXACT LOCATION AND DEPTH. POTHOLING SHALL OCCUR A MINIMUM OF 7 DAYS PRIOR TO THE COMMENCEMENT OF WORK IN ANY AREA. CONTRACTOR SHALL REPORT THE FINDINGS TO THE ENGINEER WITHIN 24 HOURS AFTER COMPLETION.

4. THE CONTRACTOR SHALL COORDINATE UNDERGROUND CONSTRUCTION IN SUCH A MANNER AS TO PREVENT ANY CONFLICT WHERE UTILITY LINES CROSS.

5. RELOCATION OF EXISTING UTILITIES SHALL BE DONE UNDER THE DIRECTION OF THE UTILITY HAVING JURISDICTION OVER THE UTILITY IN QUESTION.

6. IF ANY UNKNOWN SUBSURFACE STRUCTURES ARE ENCOUNTERED DURING THE COURSE OF CONSTRUCTION, THEY SHALL BE BROUGHT TO THE ATTENTION OF THE DESIGN ENGINEER PRIOR TO PROCEEDING.

BYPASS PUMPING NOTES

 CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE ALL CONSTRUCTION ACTIVITIES TO PROPERLY CONTROL AND DISPOSE OF RAW SEWAGE FROM EACH CONSTRUCTION SITE IN ACCORDANCE WITH APPLICABLE REGULATIONS AND LAWS FOR THE DURATION OF THE PROJECT. CONTRACTOR SHALL SUPPLY ALL NECESSARY EQUIPMENT AND WORK TO MEET THIS REQUIREMENT.

2. CONTRACTOR TO PROVIDE TEMPORARY CONNECTION TO NEW MAIN OR BYPASS PUMPING TO PROVIDE UNINTERRUPTED FLOW TO THE SYSTEM NOT BEING WORKED ON. SEWER TO BE COUPLED TO EX AND FLOW RE-ESTABLISHED AT END OF EACH DAY.

3. REFER TO SPECIFICATION SECTION SECTION 306A - BYPASS PUMPING FOR ADDITIONAL REQUIREMENTS.

IN-SITU CONSTRUCTION GENERAL NOTES

1. IDENTIFIED EXISTING SEWER MAINS AND LATERALS SHALL RECEIVE CURED-IN-PLACE PIPE (CIPP). REFER TO SPECIFICATION SECTION 306E FOR INFORMATION.

2. CONTRACTOR TO PRE CLEAN AND VIDEO EXISTING CONDITIONS PRIOR TO CONSTRUCTION.

3. ALL CIPP SHALL HAVE A COLOR TELEVISION INSPECTION PRIOR TO ACCEPTANCE BY OWNER.

4. NOTE THAT MAIN AND LATERAL SIZES ARE SHOWN BASED ON BEST AVAILABLE INFORMATION. CONTRACTOR SHALL CONFIRM AND NOTIFY THE ENGINEER OF ANY SIGNIFICANT ALTERATIONS PRIOR TO PROCURING MATERIALS.

GRAVITY SEWER POINT REPAIR GENERAL NOTES

 CONTRACTOR SHALL ASSUME EXTERNAL POINT REPAIRS ARE TO BE MADE WITH REINFORCED CONCRETE PIPE OF LIKE DIAMETER TO THE EXISTING PIPE. PRIOR TO ORDERING PARTS, CONTRACTOR DETERMINE THE ACTUAL INNER DIAMETER OF THE EXISTING SEWER MAIN AT THE LOCATION OF THE POINT REPAIR. CONTRACTOR SHALL ORDER WHICHEVER TYPE IS EQUAL TO OR SLIGHTLY GREATER THAN THE EXISTING I.D., INCLUDING, PVC SDR35 OR SDR26, AND PVC C900 PC165 PC235 OR PC305.

2. FLEXIBLE TRANSITION COUPLINGS ARE REQUIRED WHEN CONNECTING SEWER POINT REPAIR SEGMENTS TO EXISTING ADJACENT MAINS. COUPLINGS SHALL BE FERNCO STRAIGHT OR TRANSITION COUPLINGS OR APPROVED EQUAL.

3. NEW PVC TO NEW PVC COUPLINGS SHALL BE GASKETED PUSH ON PVC.

4. MARKING TAPE SHALL BE INSTALLED 12" ABOVE ALL SEWER MAINS AND LATERALS, TAPE WIDTH SHALL BE TWO (2) INCHES; THICKNESS SHALL BE FOUR (4) MIL OR GREATER AND SHALL BE GREEN AND BEAR LARGE PRINTING DENOTING "CAUTION BURIED SEWER LINE BELOW" OR EQUIVALENT WORDING.

5. CONTRACTOR SHALL CONNECT ALL EXISTING SEWER LATERALS TO THE NEW MAIN USING A SEWER LATERAL WYE CONNECTION DETAIL B/D2. UNLESS OTHERWISE APPROVED.

SEWER LATERAL NOTES - REQUIRES CONFIRMATION

1. LATERALS SHOWN ARE APPROXIMATE LOCATIONS THAT HAVE NOT BEEN VERIFIED. CONTRACTOR SHALL VERIFY ALL LATERAL LOCATIONS DURING CONSTRUCTION. ALL SANITARY SEWER LATERALS HAVE NOT BEEN VERIFIED AS ACTIVE LATERALS. CONTRACTOR SHALL VERIFY THAT ALL SANITARY SEWER LATERALS ARE ACTIVE OR INACTIVE PRIOR TO THE INSTALLATION OF ANY MAIN LINE SANITARY SEWER PIPE SEGMENT (MH TO MH). EACH ACTIVE SEWER LATERAL WHERE FLOW IS EVIDENT BY SIMPLE VISUAL INSPECTION SHALL BE RECONNECTED.

2. IF NO INDICATIONS OF FLOW ARE PRESENT THEN A PUSH TYPE CAMERA WITH VIDEO TAPE INSPECTION CAPABILITY AND SURFACE LOCATE CAPABILITY SHALL BE USED TO CONFIRM IF LATERAL IS ACTIVE OR INACTIVE. EACH LATERAL SHALL BE CONSIDERED ACTIVE UNLESS IT CAN BE POSITIVELY DETERMINED TO BE INACTIVE. THE CONTRACTOR SHALL MAINTAIN A LOG OF ALL INACTIVE AND ACTIVE LATERALS PRIOR TO RECONNECTION OR ABANDONMENT PER THE SPECIFICATIONS.

3. CONTRACTOR SHALL CONFIRM EACH BUILDING ON EACH STREET HAS AN ACTIVE SANITARY SEWER LATERAL THAT IS CONNECTED TO A SEWER MAIN. IF NO LATERAL CAN BE FOUND, CONTRACTOR SHALL EMPLOY THE USE OF A LOCATOR DOWN AN EXISTING PLUMBING VENT OR BUILDING FIXTURE WITHIN THE BUILDING TO LOCATE AND PROVIDE CONNECTION TO THE SEWER MAIN.

4. CONTRACTOR SHALL VERIFY LATERAL SIZES (2", 3", 4" OR 6") PRIOR TO INSTALLATION AND MATCH EXISTING.

ASBESTOS PIPE REMOVAL NOTES

1. REMOVAL OF ASBESTOS CEMENT PIPE (ACP), TRANSITE PIPE (TR) AND OF MATERIALS CONTAINING ASBESTOS SHALL BE PERFORMED IN ACCORDANCE WITH ALL APPLICABLE STANDARDS, LOCAL, STATE, AND FEDERAL INCLUDING BUT NOT LIMITED TO HEALTH DEPARTMENT, OSHA, NDEP, AND EPA. THE CONTRACTOR SHALL BE REQUIRED TO OBTAIN ALL PERMITS AND PAY ALL ASSOCIATED FEES AND COST RELATED TO THE LEGAL HANDLING, TRANSPORTATION AND DISPOSAL. PROPER SAFETY EQUIPMENT SHALL BE UTILIZED BY WORKERS AND BY TRANSPORT EQUIPMENT AND NO FUGITIVE DUST WILL BE ALLOWED DURING THIS WORK. MATERIAL SHALL BE WRAPPED IN PLASTIC AND LABELED AS REQUIRED. ALL WORK TO BE PERFORMED UNDER THE DIRECTION OF AN APPROVED CERTIFIED PROFESSIONAL. THE CONTRACTOR SHALL PROVIDE WRITTEN DOCUMENTATION TO THE ENGINEER FOR CHAIN OF CUSTODY FOR SAID DISPOSAL.

EXISTING LEGEND:

EX W	WATERLINE
EX SS	SANITARY SEWER
EX SD	STORM DRAIN
EX E	ELECTRICAL
EX OHP	OVER HEAD POWER
EX TELE	TELEPHONE/COMM LINE
EX G	GAS MAIN/LATERAL
ABANDONED	ABANDONED UTILITY
	PROPERTY LINE
S	EXISTING MANHOLE

PROPOSED LEGEND:

108+00 SS CIPP SANITARY SEWER MAIN / CONSTRUCTION CONTROL LINE

DETAIL AND SECTION DESIGNATION



BID SET



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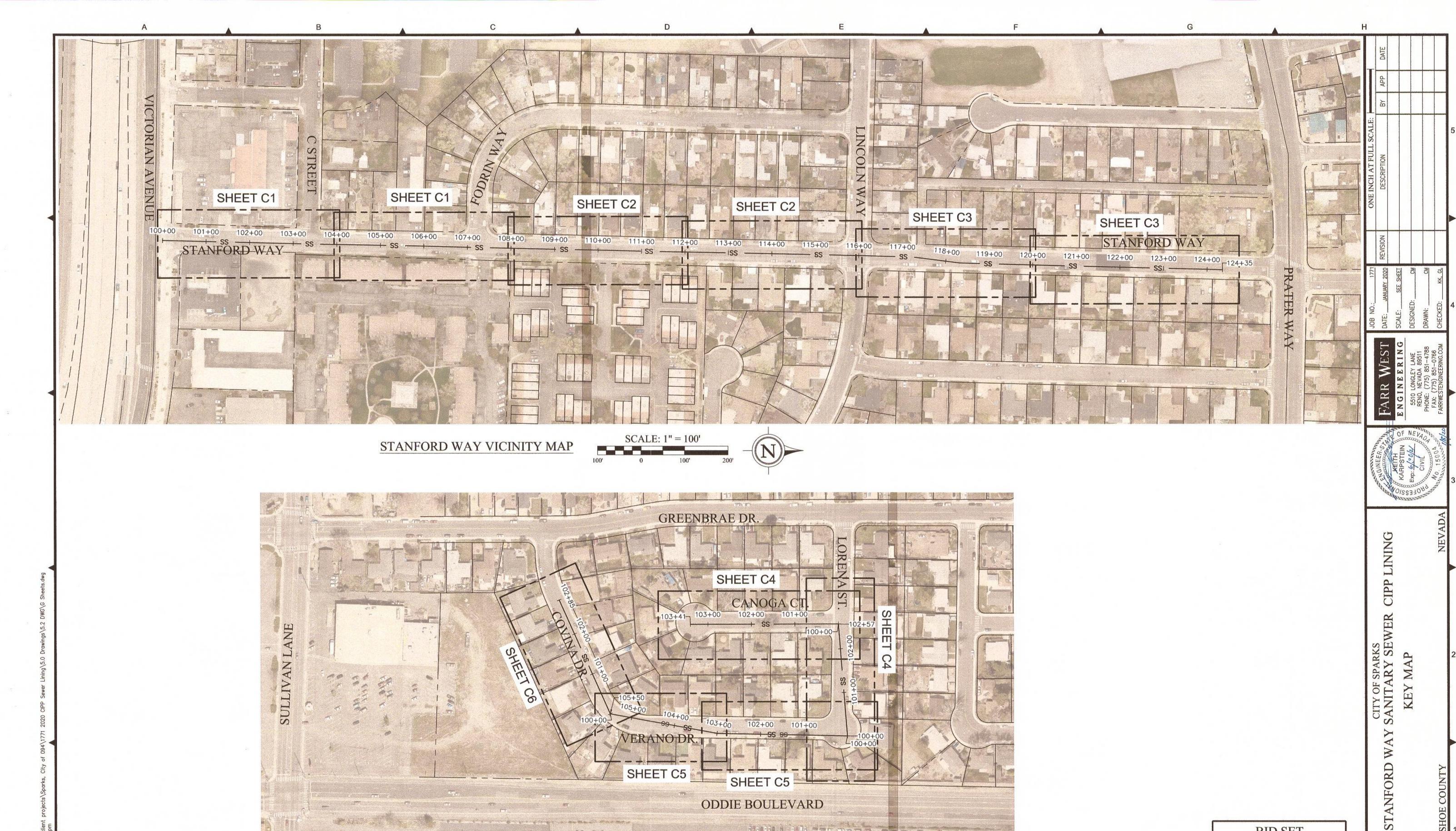
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CITY OF SPARKS
WAY SANITARY SEWER (
GENERAL NOTES

SHEET NUMBER

__2__ OF __12__



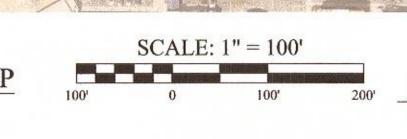
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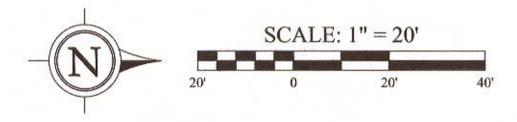
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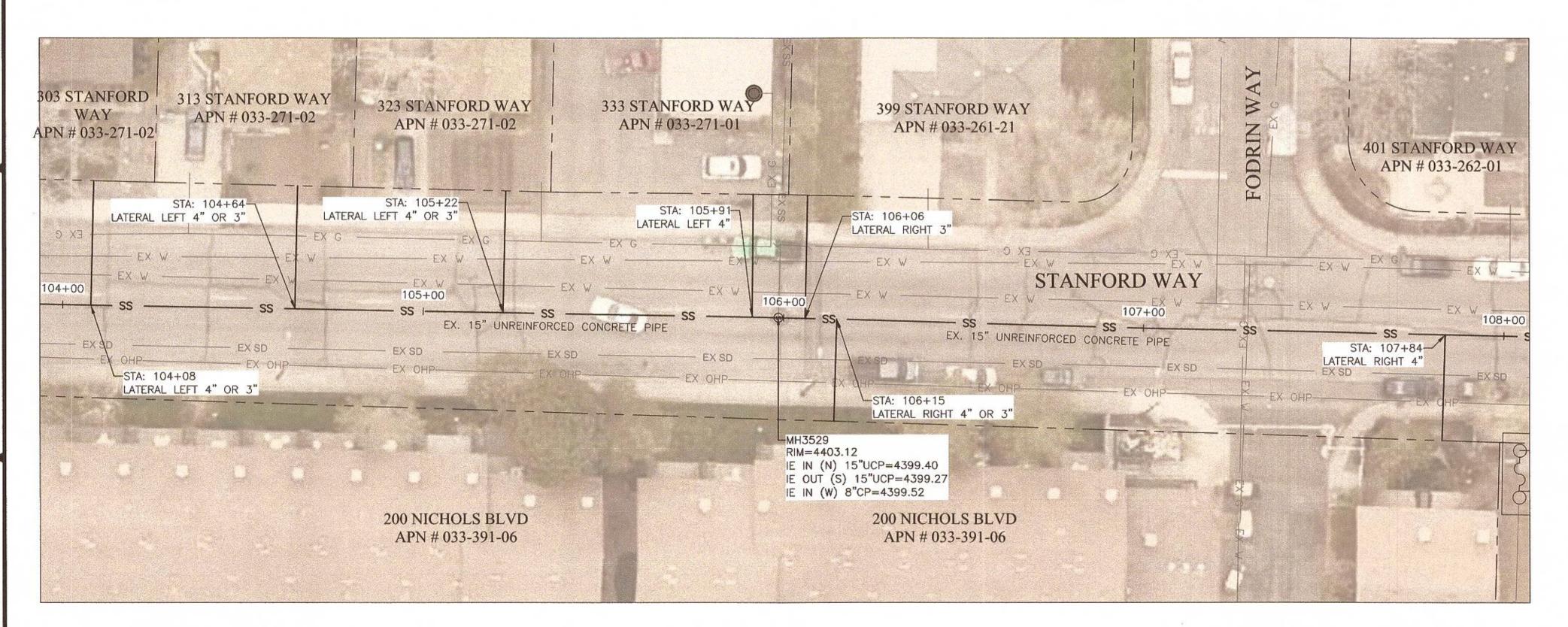
__3__ OF __12__

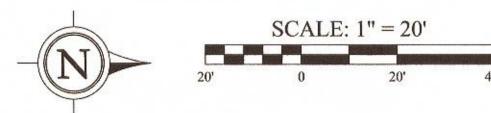
VERANO DRIVE VICINITY MAP





STANFORD WAY - STA: 100+00 TO 104+00





GENERAL NOTES:

- A. PROTECTION OF ALL UTILITIES IS THE RESPONSIBILITY OF THE CONTRACTOR, NOTE THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AND FEATURES SHOWN ON THESE DRAWINGS IS APPROXIMATE AND NOT TO BE RELIED ON AS EXACT OR COMPLETE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VIDEO, MEASURE THE DISTANCE FROM INSIDE MANHOLE, AND VERIFY THE LOCATIONS AND/OR ELEVATIONS PRIOR TO BIDDING AND CONSTRUCTION. DISCREPANCIES BETWEEN THE EXISTING CONDITIONS IN THE FIELD AND THE INFORMATION SHOWN ON THESE DRAWINGS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE PROCEEDING WITH CONSTRUCTION.
- B. CONTRACTOR SHALL NOTIFY OWNER AND ENGINEER 48 HOURS IN ADVANCE OF ANY SECTION REPLACEMENT.
- C. CLEAN AND REHABILITATE EXISTING SEWER MAIN WITH CIPP PER SPECIFICATION SECTION 306E. CONFIRM I.D. PRIOR TO PROCURING MATERIALS.
- D. CONTRACTOR SHALL VERIFY THE SIZE AND PRECISE LOCATION OF EACH LATERAL PRIOR TO ORDERING OR INSTALLING TOP HATS. CONTRACTOR SHALL VERIFY AND REINSTATE ALL LATERALS WITHIN SEWER MAIN AND INSTALL "TOP HAT" SEAL AT ALL LATERAL TO MAIN CONNECTIONS PER SECTION 306E.
- E. CONTRACTOR TO PROVIDE BYPASS PUMPING TO PROVIDE UNINTERRUPTED FLOW TO THE SYSTEM NOT BEING WORKED ON. SEWER FLOW TO BE RE-ESTABLISHED AT THE END OF EACH DAY.
- F. PRIOR TO PERFORMING POINT REPAIRS, CONTRACTOR SHALL MAKE OWN DETERMINATION AS TO WHETHER EXISTING PIPE CONTAINS ASBESTOS, AND USE APPROPRIATE ABATEMENT AS NECESSARY.
- G. CONTRACTOR SHALL BE RESPONSIBLE TO IDENTIFY AND TRIM ALL ROOTS WHICH HAVE THE POTENTIAL TO REFLECT THROUGH THE CIPP, INCLUDING IN THE PORTIONS OF LATERALS WHICH ARE TO BE REHABILITATED
- H. CONTRACTOR SHALL PROVIDE AND IMPLEMENT A TRAFFIC CONTROL PLAN PER THE SPECIFICATIONS, MUTCD LATEST EDITION, DETAILS ON SHEET D3, AND EXCAVATION AND ENCROACHMENT PERMIT.
- I. GRIND AND OVERLAY WITH PERMANENT PAVEMENT PATCH REQUIRED PER DETAIL B/D1 ON VERANO, COVINA, CANOGA, AND LORENA. REMOVE AND REPLACE STRIPING TO EQUAL OR BETTER CONDITION. THIS NOTE DOES NOT APPLY TO STANFORD WAY.

SHEET NOTES:

- EXISTING PIPE WALL PARTLY BROKEN ~2FT. EITHER GRIND UNTIL FLUSH WITH SURROUNDING PIPE WALL PER BID ITEM 10 INTERNAL POINT REPAIR; OR PERFORM EXTERNAL POINT REPAIR PER BID ITEM 9 AND DETAILS B/D1, D/D1, AND E/D2.
- TOP HALF OF EXISTING PIPE WALL MISSING ~4FT. PERFORM EXTERNAL POINT REPAIR PER BID ITEM 9 AND DETAILS B/D1, D/D1, AND E/D2.

100+00 TO 108+00

SHEET NUMBER

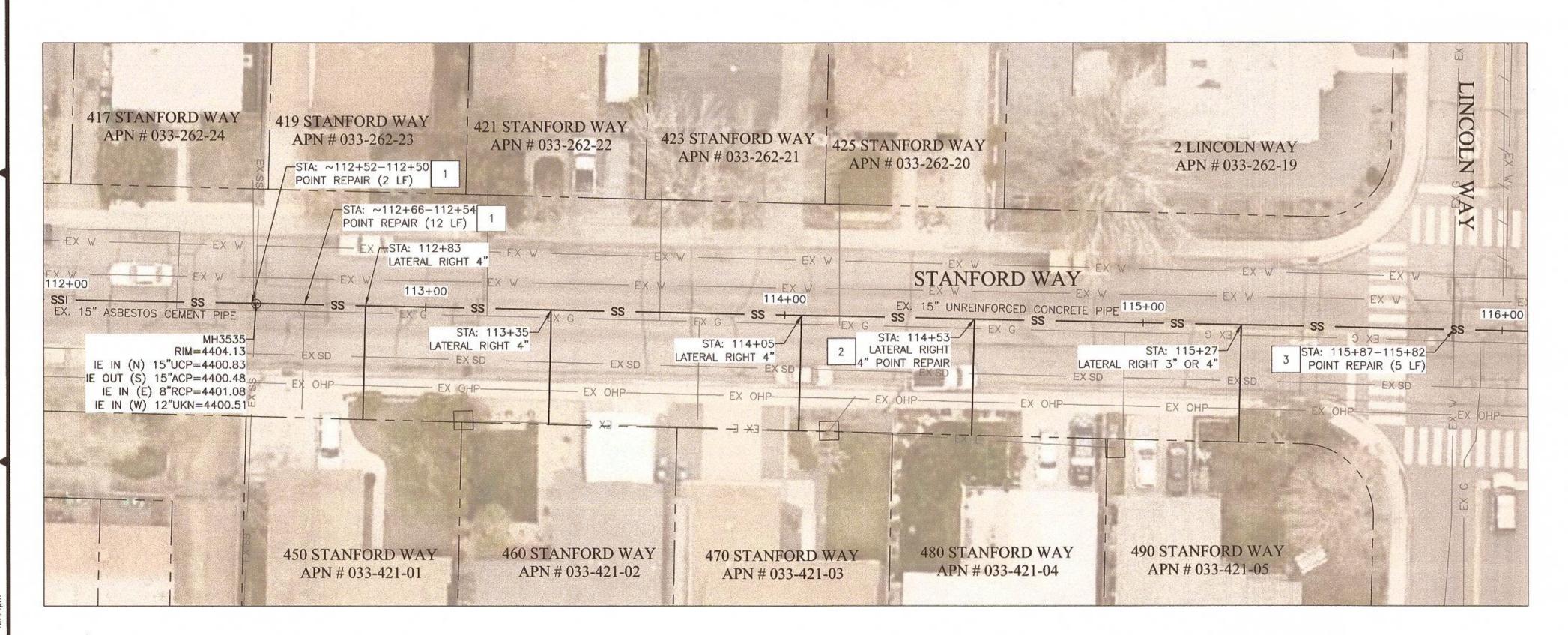
4 OF 12

BID SET

STANFORD WAY - STA: 104+00 TO 108+00

SCALE: 1'' = 20'

STANFORD WAY - STA: 108+00 TO 112+00



SCALE: 1'' = 20'

STANFORD WAY - STA: 112+00 TO 116+00

GENERAL NOTES:

- A. PROTECTION OF ALL UTILITIES IS THE RESPONSIBILITY OF THE CONTRACTOR, NOTE THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AND FEATURES SHOWN ON THESE DRAWINGS IS APPROXIMATE AND NOT TO BE RELIED ON AS EXACT OR COMPLETE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VIDEO, MEASURE THE DISTANCE FROM INSIDE MANHOLE, AND VERIFY THE LOCATIONS AND/OR ELEVATIONS PRIOR TO BIDDING AND CONSTRUCTION. DISCREPANCIES BETWEEN THE EXISTING CONDITIONS IN THE FIELD AND THE INFORMATION SHOWN ON THESE DRAWINGS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE PROCEEDING WITH CONSTRUCTION.
- B. CONTRACTOR SHALL NOTIFY OWNER AND ENGINEER 48 HOURS IN ADVANCE OF ANY SECTION REPLACEMENT.
- C. CLEAN AND REHABILITATE EXISTING SEWER MAIN WITH CIPP PER SPECIFICATION SECTION 306E, CONFIRM I.D. PRIOR TO PROCURING MATERIALS
- D. CONTRACTOR SHALL VERIFY THE SIZE AND PRECISE LOCATION OF EACH LATERAL PRIOR TO ORDERING OR INSTALLING TOP HATS. CONTRACTOR SHALL VERIFY AND REINSTATE ALL LATERALS WITHIN SEWER MAIN AND INSTALL "TOP HAT" SEAL AT ALL LATERAL TO MAIN CONNECTIONS PER SECTION 306E.
- E. CONTRACTOR TO PROVIDE BYPASS PUMPING TO PROVIDE UNINTERRUPTED FLOW TO THE SYSTEM NOT BEING WORKED ON. SEWER FLOW TO BE RE-ESTABLISHED AT THE END OF EACH DAY
- F. PRIOR TO PERFORMING POINT REPAIRS, CONTRACTOR SHALL MAKE OWN DETERMINATION AS TO WHETHER EXISTING PIPE CONTAINS ASBESTOS, AND USE APPROPRIATE ABATEMENT AS NECESSARY.
- G. CONTRACTOR SHALL BE RESPONSIBLE TO IDENTIFY AND TRIM ALL ROOTS WHICH HAVE THE POTENTIAL TO REFLECT THROUGH THE CIPP, INCLUDING IN THE PORTIONS OF LATERALS WHICH ARE TO BE
- H. CONTRACTOR SHALL PROVIDE AND IMPLEMENT A TRAFFIC CONTROL PLAN PER THE SPECIFICATIONS, MUTCD LATEST EDITION, DETAILS ON SHEET D3, AND EXCAVATION AND ENCROACHMENT PERMIT.
- I. GRIND AND OVERLAY WITH PERMANENT PAVEMENT PATCH REQUIRED PER DETAIL B/D1 ON VERANO, COVINA, CANOGA, AND LORENA. REMOVE AND REPLACE STRIPING TO EQUAL OR BETTER CONDITION. THIS NOTE DOES NOT APPLY TO STANFORD WAY.

SHEET NOTES

- REPLACE EXISTING UNDERSIZE PVC PIPE ~4FT, INCLUDING MAKE CONNECTION TO EXISTING MANHOLE, PERFORM EXTERNAL POINT REPAIR PER BID ITEM 9 AND DETAILS B/D1, D/D1, E/D1, A/D2, AND E/D2.
- EXISTING LATERAL PROTRUDES INTO MAIN. GRIND UNTIL FLUSH WITH 2 SURROUNDING PIPE WALL PER BID ITEM 10 INTERNAL POINT

BID SET

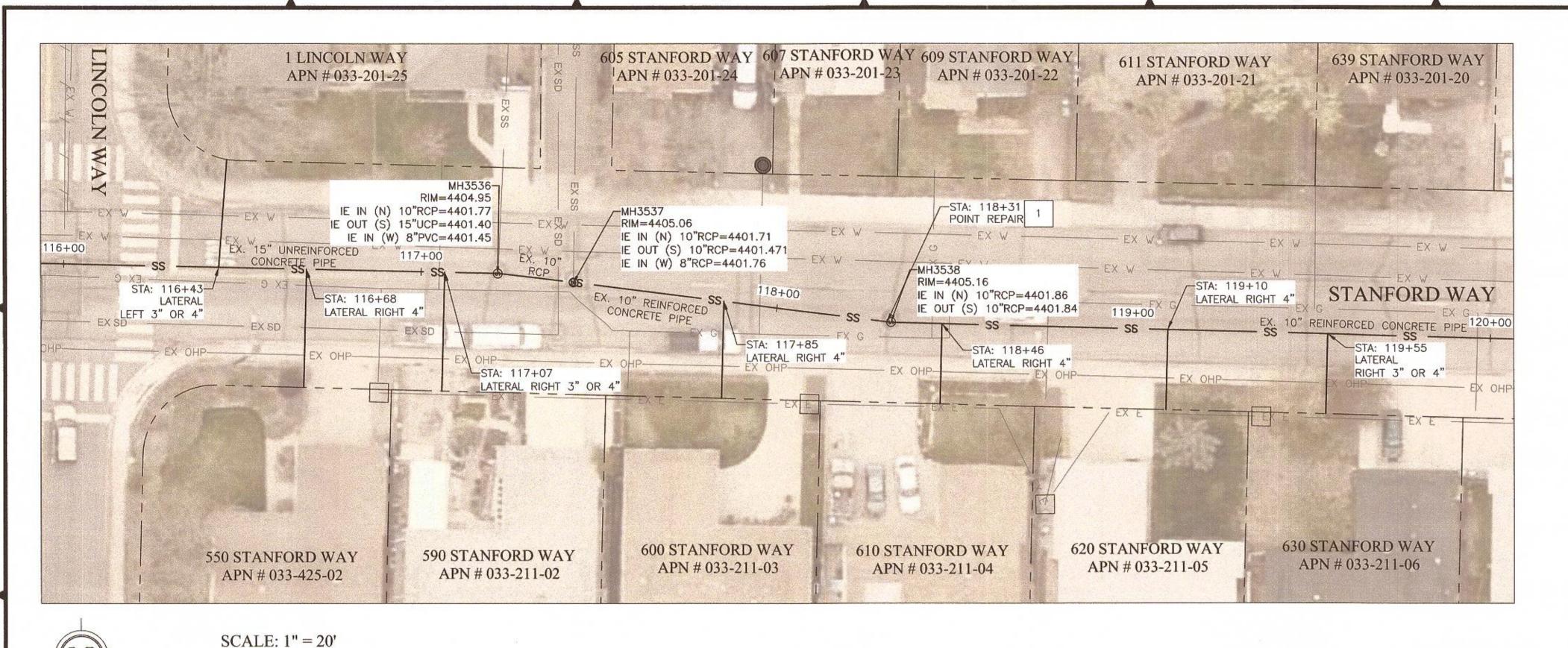
REPLACE EXISTING UNDERSIZE PVC PIPE ~10FT, PERFORM EXTERNAL POINT REPAIR PER BID ITEM 9 AND DETAILS B/D1. D/D1, AND E/D2.

LININ 16+00

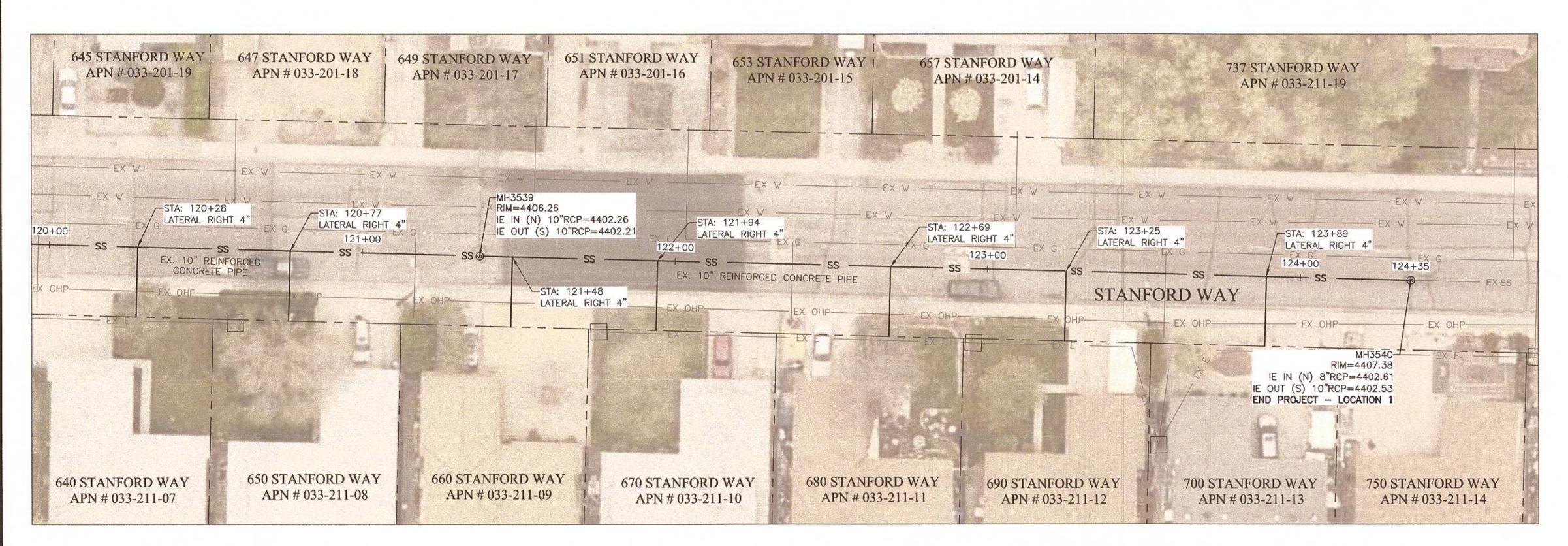
CITY OF SPARKS
SANITARY SEWER TO 108+00 STANFORD WAY STANFORD WAY

SHEET NUMBER

5 OF 12



STANFORD WAY - STA: 116+00 TO 120+00



STANFORD WAY - STA: 120+00 TO 124+35

GENERAL NOTES:

- A. PROTECTION OF ALL UTILITIES IS THE RESPONSIBILITY OF THE CONTRACTOR. NOTE THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AND FEATURES SHOWN ON THESE DRAWINGS IS APPROXIMATE AND NOT TO BE RELIED ON AS EXACT OR COMPLETE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VIDEO, MEASURE THE DISTANCE FROM INSIDE MANHOLE, AND VERIFY THE LOCATIONS AND/OR ELEVATIONS PRIOR TO BIDDING AND CONSTRUCTION. DISCREPANCIES BETWEEN THE EXISTING CONDITIONS IN THE FIELD AND THE INFORMATION SHOWN ON THESE DRAWINGS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE PROCEEDING WITH CONSTRUCTION.
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- H. CONTRACTOR SHALL PROVIDE AND IMPLEMENT A TRAFFIC CONTROL PLAN PER THE SPECIFICATIONS, MUTCD LATEST EDITION, DETAILS ON SHEET D3, AND EXCAVATION AND ENCROACHMENT PERMIT.
- I. GRIND AND OVERLAY WITH PERMANENT PAVEMENT PATCH REQUIRED PER DETAIL B/D1 ON VERANO, COVINA, CANOGA, AND LORENA. REMOVE AND REPLACE STRIPING TO EQUAL OR BETTER CONDITION. THIS NOTE DOES NOT APPLY TO STANFORD WAY.

SHEET NOTES:

REPLACE EXISTING UNDERSIZE PVC PIPE ~4FT, INCLUDING MAKE CONNECTION TO EXISTING MANHOLE. PERFORM EXTERNAL POINT REPAIR PER BID ITEM 9 AND DETAILS B/D1, D/D1, E/D1, A/D2, AND E/D2.

BID SET

LININ CITY OF SPARKS
SANITARY SEWER TO 116+00

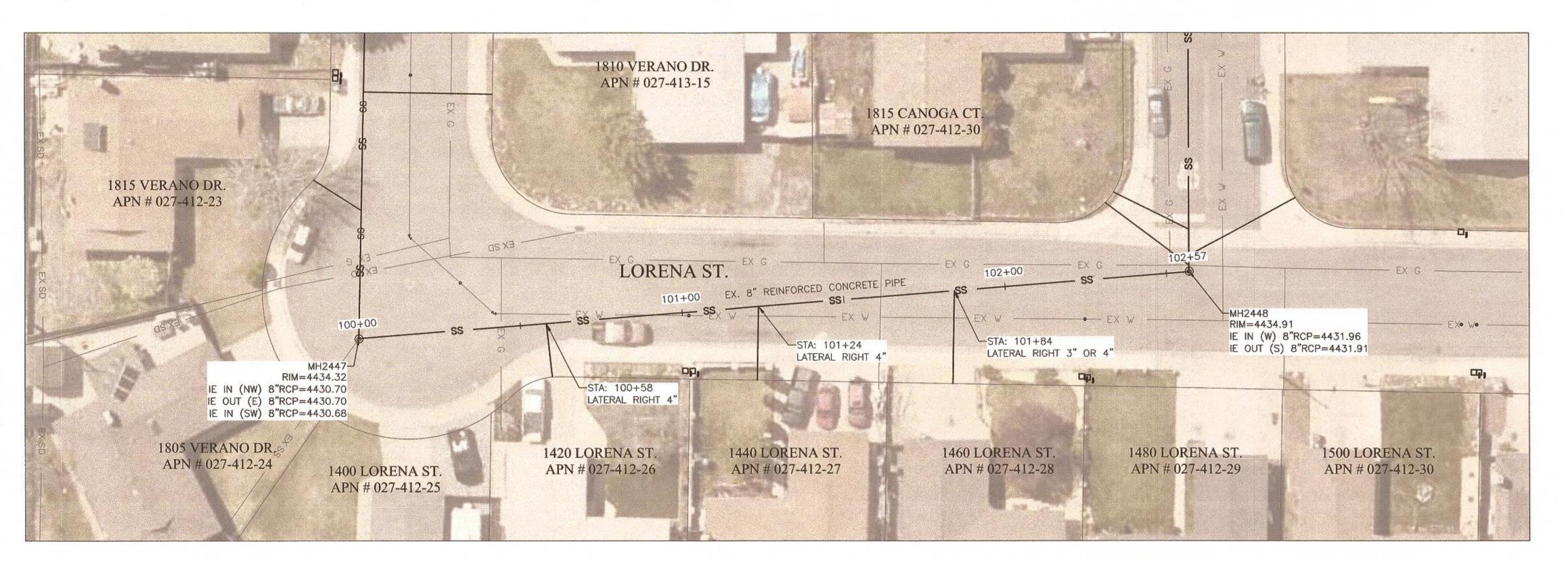
STANFORD WAY STANFORD WAY

SHEET NUMBER

6 OF 12

SCALE: 1'' = 20'

CANOGA COURT - STA: 100+00 TO 103+41



SCALE: 1'' = 20'

LORENA STREET - STA: 100+00 TO 102+57

GENERAL NOTES:

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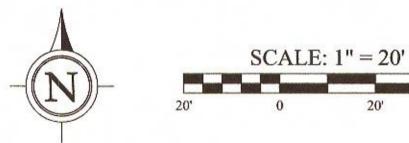
CIPP LININ STREET CITY OF SPARKS
SANITARY SEWER LOREN COURT AND STANFORD WAY

CANOGA

SHEET NUMBER

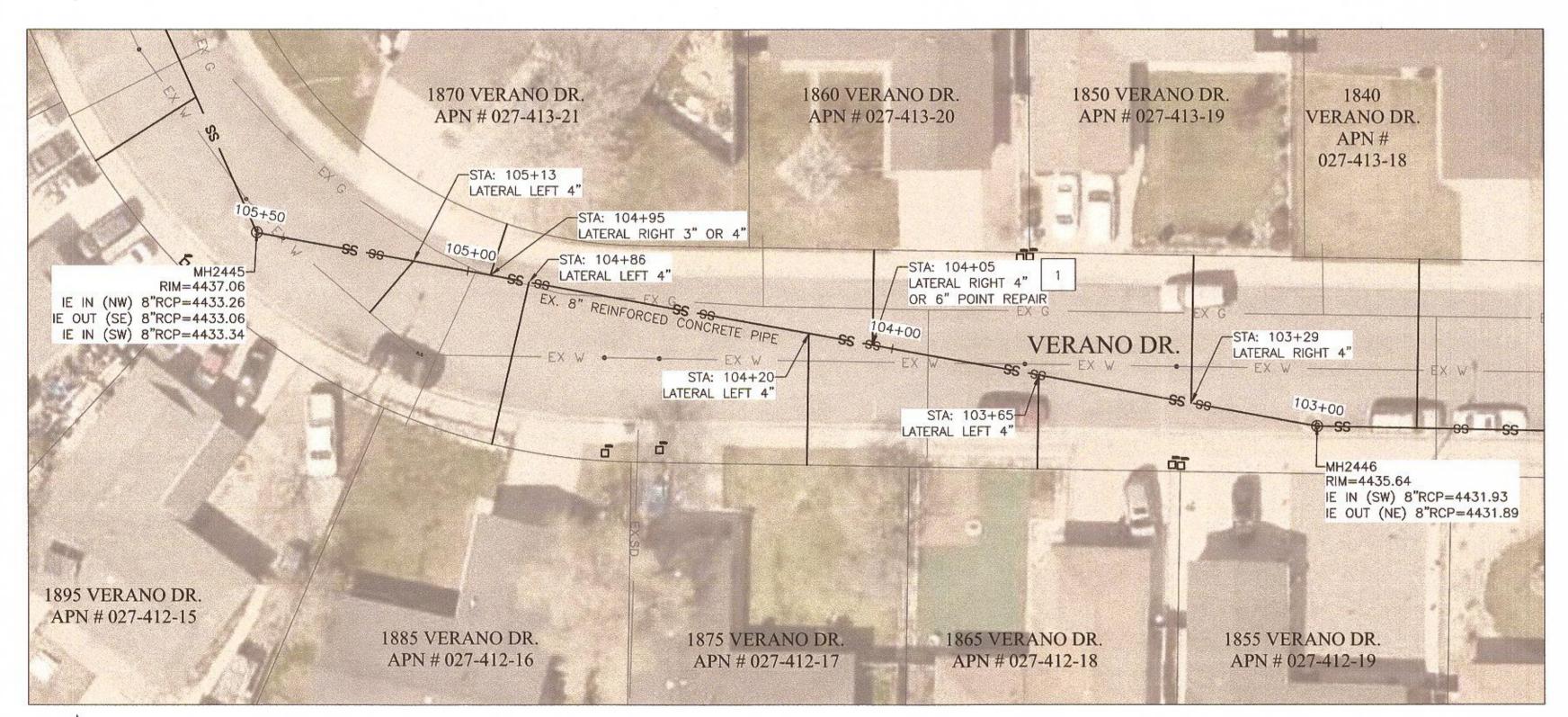
7 OF 12

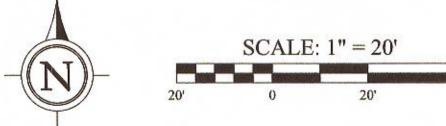
BID SET



20'

VERANO DRIVE - STA: 100+00 TO 103+00





VERANO DRIVE - STA: 103+00 TO 105+50

GENERAL NOTES:

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CONSTRUCTION NOTES:

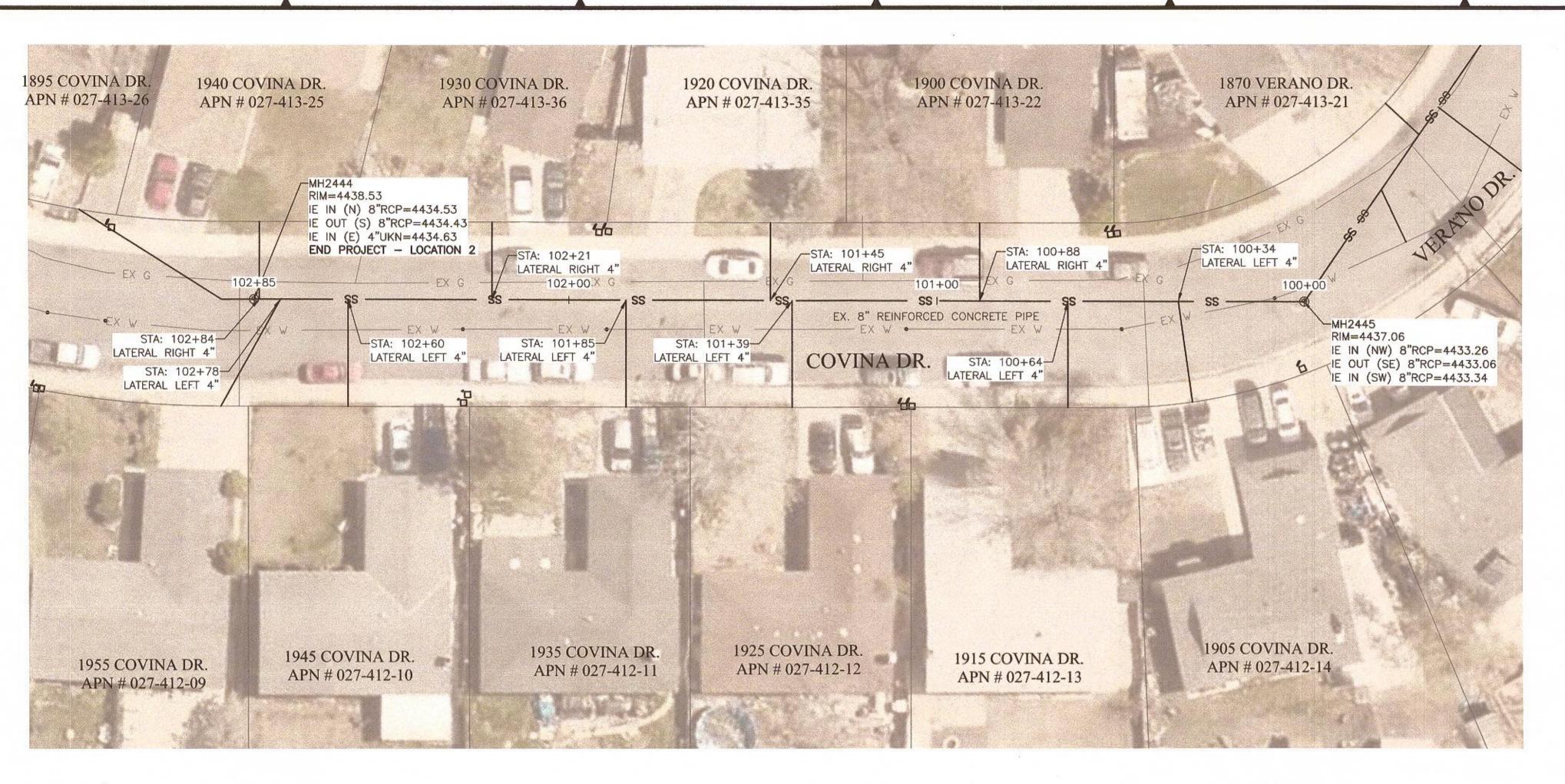
EXISTING LATERAL PROTRUDES INTO MAIN. GRIND UNTIL FLUSH WITH SURROUNDING PIPE WALL PER BID ITEM 10 INTERNAL POINT REPAIR.

CITY OF SPARKS
SANITARY SEWER VERANO DRIVE

SHEET NUMBER

8 OF 12

BID SET



SCALE: 1'' = 20'

COVINA DRIVE - STA: 100+00 TO 102+85

GENERAL NOTES:

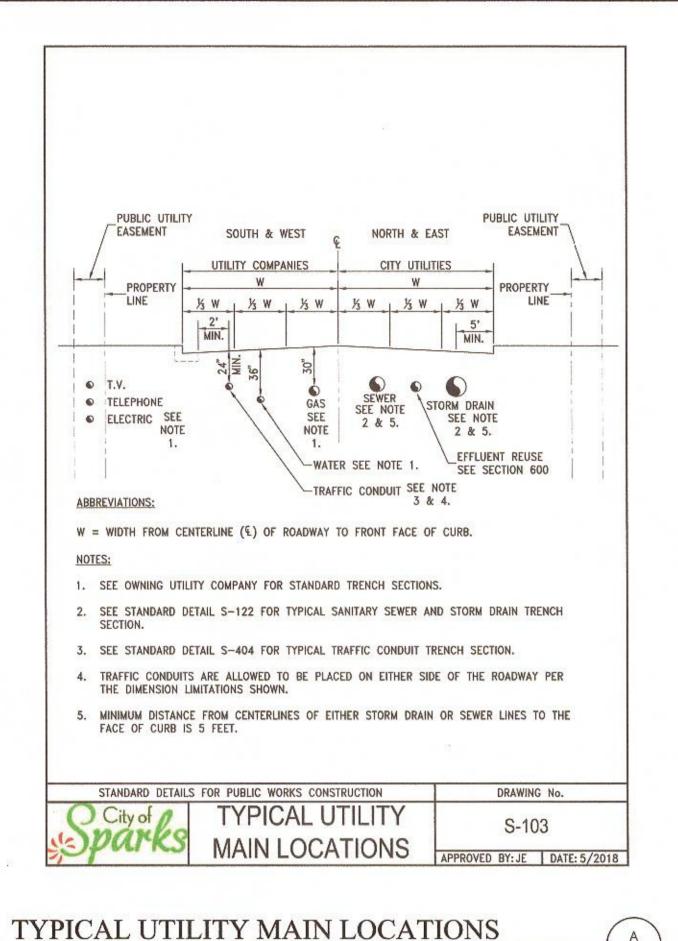
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	ONE INCH AT FULL SCALE:		National Control	
NOISION	DESCRIPTION	BY	APP	DATE

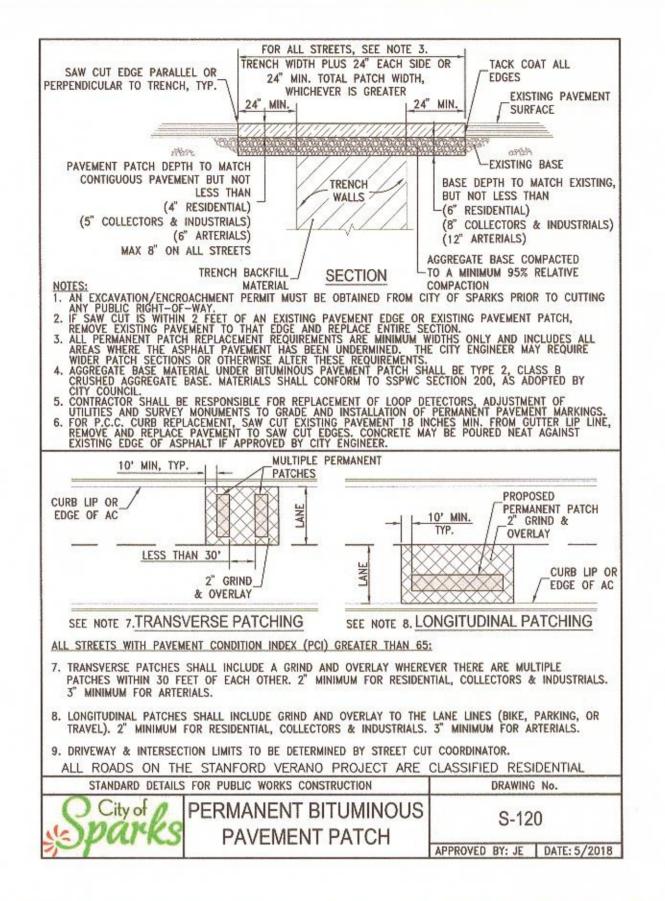
CIPP LININ

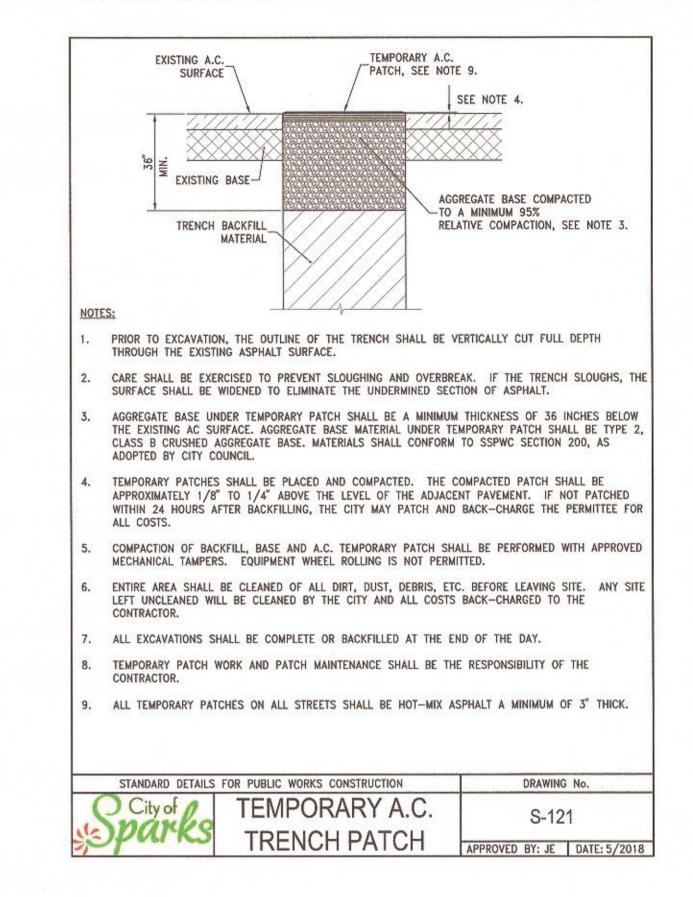
CITY OF SPARKS
SANITARY SEWER COVINA DRIVE STANFORD

SHEET NUMBER



SCALE: NTS





TEMPORARY A.C. TRENCH PATCH





SCALE: NTS



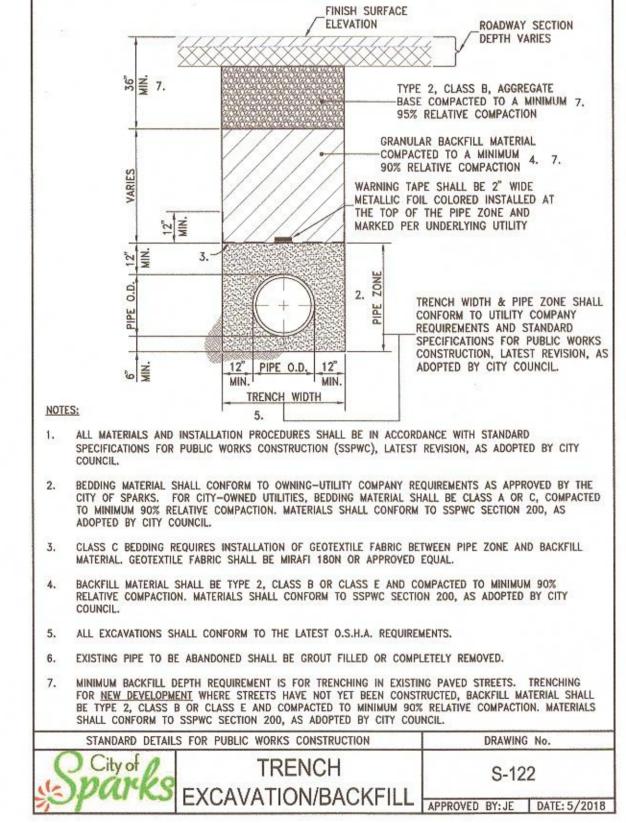
BID SET

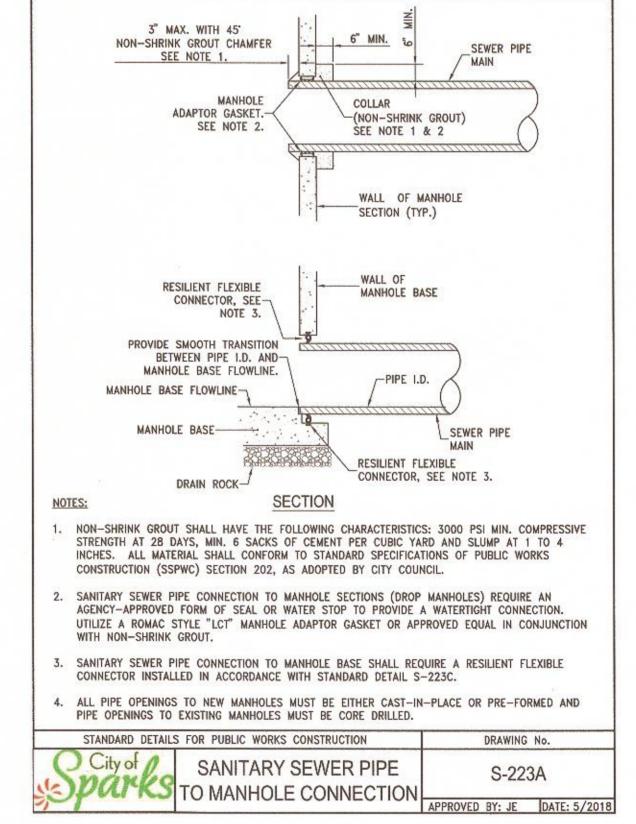
DETAIL

SHEET NUMBER

10 OF 12

PERMANENT BITUMOUS PAVEMENT PATCH SCALE: NTS





SANITARY SEWER PIPE TO MAHOLE CONNECTION

SCALE: NTS

D1

TRENCH EXCAVATION/BACKLFIILL

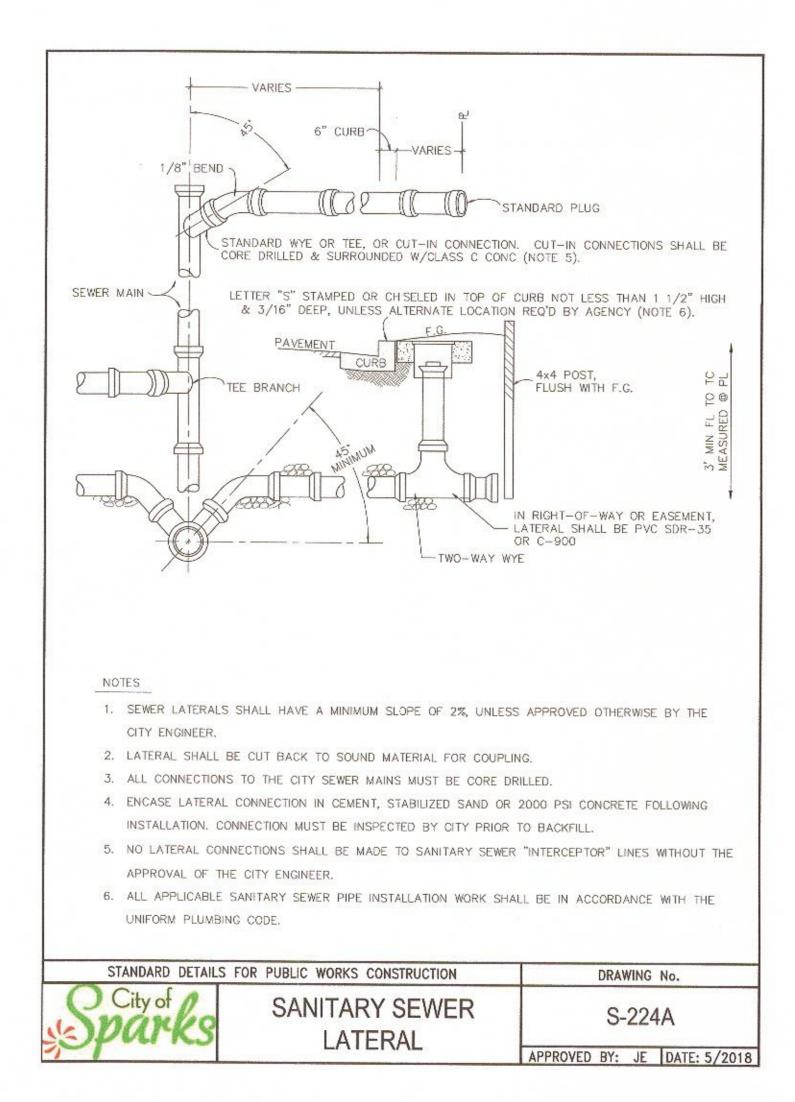
SCALE: NTS

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 ! - 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 DETAILS	FOR PUBLIC WORKS CONSTRUCTION	DRAWING	No.
Sparks	RESILIENT FLEXIBLE CONNECTOR	S-22	3C
		APPROVED BY: JE	DATE: 5/2018



- SEWER LATERALS SHALL HAVE A MINIMUM PIPE DIAMETER OF 4-INCHES.
- 2. 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.
- 3. SERVICE LATERALS SHALL HAVE A MINIMUM SLOPE OF 1/4-INCH PER FOOT UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER.
- 4. 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.
- 5. USE OF SEWER SERVICE TAP SADDLE CONNECTIONS SHALL NOT BE ALLOWED FOR NEW SEWER 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-224C.
- 6. 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 STRUCTURE.
- EXISTING SEWER LATERALS SHALL BE CUT BACK TO SOUND MATERIAL FOR COUPLING. PLACE 6-INCH THICK CONCRETE PAD UNDER CONNECTION.
- 9. SEWER LATERAL CONNECTION SHALL BE STABILIZED WITH APPROVED MATERIAL FOLLOWING INSTALLATION. CONNECTION TO CITY SEWER MAIN MUST BE INSPECTED BY THE CITY PRIOR TO BACKFILL.
- 10. 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 IS BETWEEN TWO MANHOLE STRUCTURES.
- 12. EACH INDIVIDUAL PARCEL SHALL HAVE A MINIMUM OF ONE SEWER LATERAL. TWO OR MORE PARCELS SHALL NOT SHARE ONE SEWER LATERAL.
- 13. SANITARY SEWER LATERAL IDENTIFICATION AND LOCATING REQUIREMENTS SHALL BE PER SPARKS MUNICIPAL CODE 17.16.130 (SMC 17.16.130).
- 14. 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
- 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 DETAILS FOR PUBLIC WORKS CONSTRUCTION	DRAWING No.
NOTES - SANITARY SEWER	S-224B
E ti Ei ti te	APPROVED BY: JE DATE:5/201

RESILIENT FLEXIBLE CONNECTOR SCALE: NTS

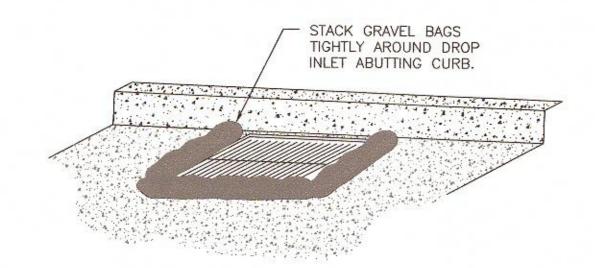
D2

SANITARY SEWER LATERAL SCALE: NTS



NOTES SANITARY SEWER SCALE: NTS

D2

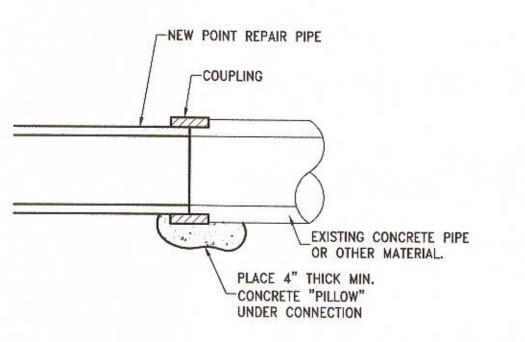


NOTES

- 1. AT EACH EXTERNAL POINT REPAIR, PROTECT NEAREST DOWN-SLOPE
- DROP INLET PER THIS DETAIL. 2. INSTALL FILTER FABRIC BELOW GRATES, EXTEND FILTER FABRIC EIGHTEEN INCHES (18") BEYOND THE EDGE OF THE GRATE ALL DIRECTIONS.

DROP INLET PROTECTION DETAIL SCALE: NTS





NOTES

- 1. CONSTRUCT POINT REPAIR WITH WHICHEVER PIPE IS EQUAL TO OR SLIGHTLY GREATER THAN THE EXISTING I.D., PVC SDR35 OR SDR26, AND PVC C900 PC165 PC235 OR PC305.
- 2. CONTRACTOR TO VERIFY OUTSIDE DIAMETER OF EXISTING PIPE AND PROVIDE PROPER FLEXIBLE COUPLINGS TO NEW PIPE.
- 2. FERNCO FLEXIBLE COUPLING OR OTHER APPROVED COUPLING SHALL BE INSTALLED PER MANUFACTURER RECOMMENDATIONS.
- 3. THE ROLE OF THE COUPLINGS IS TO SECURE THE NEW TO THE EXISTING PIPE UNTIL THE CIPP CURE IS COMPLETE.

EX PIPE TO NEW PIPE CONNECTION SCALE: NTS

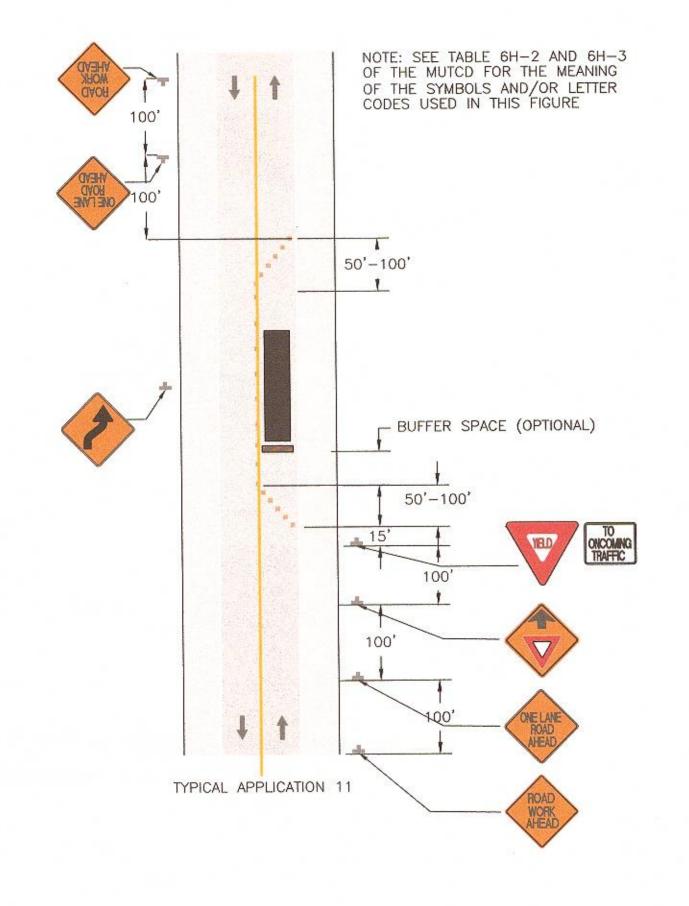


BID SET

SHEET NUMBER

CITY OF SPARKS ANITARY SEWER

11 OF 12



END ROAD WORK NOTE: SEE TABLE 6H-2 AND 6H-3 OF THE MUTCD FOR THE MEANING OF THE SYMBOLS AND/OR LETTER CODES USED IN THIS FIGURE CALCULATE "L" PER — MUTCD TABLE 6C-4 CALCULATE "L" PER MUTCD TABLE 6C-4 10 FEET MIN. TO EDGE OF PAVEMENT OR OUTSIDE EDGE OF -PAVED SHOULDER HOAD WORK TYPICAL APPLICATION 15

CALCULATE "L" PER MUTCD TABLE 6C-4 10' 10' MIN. 10' MIN. MIN. HOAD WORK NOTE: SEE TABLE 6H-2 AND 6H-3 OF THE MUTCD FOR THE MEANING OF THE SYMBOLS AND/OR LETTER CODES USED IN THIS FIGURE

TYPICAL APPLICATION 26

LANE CLUSURE ON A TWO-LANE ROAD WITH LOW TRAFFIC VOLUMES

SCALE: NTS

WORK IN THE CENTER OF A ROAD WITH LOW TRAFFIC VOLUMES

SCALE: NTS

D3

CLOSURE IN THE CENTER OF AN INTERSECTION

SCALE: NTS

 $\begin{pmatrix} c \\ D3 \end{pmatrix}$

1) ALL TRAFFIC CONTROL SHALL MEET OR EXCEED THE REQUIREMENTS AS OUTLINED IN THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) LATEST EDITION & STANDARD SPECIFICATIONS FOR THE CONSTRUCTION OF PUBLIC WORKS, UNLESS NOTED OTHERWISE. IF DEVIATIONS FROM THE TYPICAL TRAFFIC CONTROL PLANS ARE NECESSARY, THE CONTRACTOR SHALL SUBMIT AN AMENDED TRAFFIC CONTROL PLAN

- PRIOR TO CONSTRUCTION ACTIVITY, THE CONTRACTOR SHALL SUBMIT A TRAFFIC CONTROL PLAN FOR HANDLING TRAFFIC THROUGH THE PROJECT SITE TO THE ENGINEER FOR APPROVAL.
- 3) ALL ADVANCED WARNING SIGNS SHALL BE PER THE TABLE IN DETAIL E/D3.
- 4) PORTABLE DELINEATORS SHALL BE A MINIMUM OF 36" HIGH AND PLACED APPROXIMATELY 25 FEET APART.
- 5) WHEN TWO-WAY TRAFFIC IS NOT POSSIBLE, CONTRACTOR SHALL MAINTAIN ONE LANE OF TRAFFIC AT ALL TIMES DURING CONSTRUCTION ACTIVITY. AFTER WORKING HOURS ALL TRAFFIC CONTROLS SHALL BE LIFTED, TRAFFIC BARRIER REMOVED AND TRAFFIC FLOW RETURNED TO NORMAL.
- 6) CONTRACTOR SHALL MANAGE AND BE RESPONSIBLE FOR ALL TRAFFIC CONTROL OPERATIONS TO ENSURE PUBLIC SAFETY AND SHALL ASSIGN AN EMPLOYEE TO FULL TIME MAINTENANCE OF TRAFFIC CONTROL
- 7) ALL TRAFFIC CONTROL OPERATIONS ARE SUBJECT TO APPROVAL OF THE ENGINEER AND MAY BE REQUIRED TO BE ALTERED BY THE CONTRACTOR IF IT IS PERCEIVED THAT A DANGEROUS CONDITION MAY EXIST. THE

TRAFFIC CONTROL NOTES SCALE: NTS



TEMPORARY TRAFFIC CONTROL ZONE SIGN AND PLAQUE SIZES SIGN OR PLAQUE SIGN DESIGNATION 36X36X36 R1 - 2TO ONCOMING 36X30 R1-2aPTRAFFIC (PLAQUE) 24X30 KEEP RIGHT R4-7 TURN AND CURVE W1-1,2,3,436X36 SIGNS 36X36 YIELD AHEAD ADVISORY SPEED 24X24 W13-1P (PLAQUE) XX FEET 24X18 (PLAQUE) ROAD WORK (WITH 36X36 W20-1DISTANCE)

TEMPORARY SIGNS TABLE SCALE: NTS

D3

BID SET

SHEET NUMBER

____12___OF ___12___