EPC : COMMENTS

HR GREEN: RESPONSES

THE COTTAGES AT MESA RIDGE

CONSTRUCTION DRAWING

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THE COTTAGES AT MESA RIDGE
EL PASO COUNTY CONSTRUCTION DOCUMENTS AND GRADING AND EROSION CONTROL PLANS

A PORTION OF THE NORTHEAST QUARTER OF SECTION 29, THE SOUTHEAST QUARTER OF SECTION 20, THE SOUTHWEST QUARTER OF SECTION 21, & THE NORTHWEST QUARTER OF SECTION 28, TOWNSHIP 13 SOUTH, RANGE 65 WEST OF THE 6TH P.M., COUNTY OF EL PASO, STATE OF COLORADO

LEGAL DESCRIPTION:

THAT PORTION OF THE NORTHWEST QUARTER OF SECTION 28 AND THE NORTHEAST QUARTER OF SECTION 29, TOWNSHIP 15 SOUTH, RANGE 65 WEST OF THE 6TH P.M., COUNTY OF EL PASO, STATE OF COLORADO, DESCRIBED AS FOLLOWS:

BASIS OF BEARINGS: BEARINGS ARE BASED UPON THE NORTH LINE OF THE NORTHEAST QUARTER OF SAID SECTION 29, MONUMENTED AT THE WEST END WITH A 3.25" ALUMINUM CAP IN CONCRETE STAMPED "PLS 4842" AND MONUMENTED AT THE EAST END WITH A #6 REBAR AND 3.25" ALUMINUM CAP STAMPED "PLS 38141" AND ASSUMED TO BEAR S 89°57'13" E A FIELD MEASURED DISTANCE OF 2,652.37 FEET.

BENCHMARK: ELEVATIONS ARE BASED UPON THE FOUNTAIN SANITATION DISTRICT POINT N-1, BEING A 2" BRASS CAP IN CONCRETE AT THE NORTHEAST CORNER OF MESA RIDGE PARKWAY AND FOUNTAIN MESA ROAD. (ELEVATION=5750.57 NGVD 29).

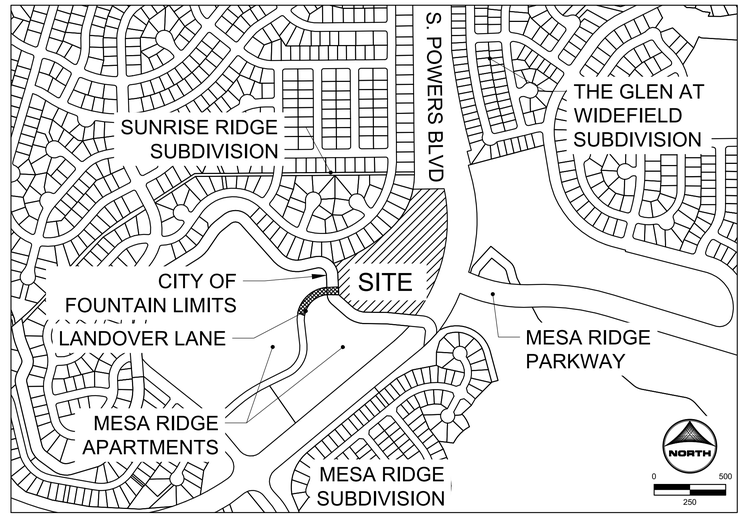
BEGINNING AT THE NORTHWEST CORNER OF THE NORTHWEST QUARTER OF SAID SECTION 28;
THENCE N 89°41'59" E ALONG THE NORTH LINE OF SAID NORTHWEST QUARTER, A DISTANCE OF 117.30 FEET TO A POINT ON THE WEST LINE OF POWERS BOULEVARD AS RECORDED UNDER BOOK 6788 AT PAGE 531 OF THE RECORDS OF THE EL PASO COUNTY CLERK AND RECORDERS OFFICE;
THENCE ALONG THE WEST LINE OF SAID POWERS BOULEVARD, 933.14 FEET ALONG THE ARC OF A 1,096.98 FOOT RADIUS CURVE TO THE RIGHT, HAVING A CENTRAL ANGLE OF 48°44'17" AND A CHORD THAT BEARS S 12°56'23" W, 905.26 FEET TO A POINT ON THE NORTHERLY LINE OF THAT PARCEL OF LAND DESCRIBED UNDER BOOK 5506 AT PAGE 1290 OF SAID RECORDS;
THENCE OF THE FOLLOWING EIGHT (8) COURSES ALONG SAID NORTHERLY LINES AND EASTERLY LINES OF SAID PARCEL OF LAND DESCRIBED UNDER BOOK 5506 AT PAGE 1290:
1) N 84°16'00" W, A DISTANCE OF 198.99 FEET;
2) 46.11 FEET ALONG THE ARC OF A 540.00 FOOT RADIUS TANGENT CURVE TO THE LEFT, HAVING A CENTRAL ANGLE OF 04°53'33" AND A CHORD THAT BEARS N 86°42'46" W, 46.10 FEET;
3) N 89°09'33" W, A DISTANCE OF 124.09 FEET;
4) 100.02 FEET ALONG THE ARC OF A 140.00 FOOT RADIUS TANGENT CURVE TO THE RIGHT, HAVING A CENTRAL ANGLE OF 40°56'07" AND A CHORD THAT BEARS N 68°41'30" W, 97.91 FEET;
5) N 48°13'27" W, A DISTANCE OF 126.77 FEET;
6) 6.49 FEET ALONG THE ARC OF AN 8.00 FOOT RADIUS TANGENT CURVE TO THE RIGHT, HAVING A CENTRAL ANGLE OF 46°29'23" AND A CHORD THAT BEARS N 24°58'45" W, 6.31 FEET;
7) N 01°44'04" W, A DISTANCE OF 137.18 FEET;
8) 87.71 FEET ALONG THE ARC OF A 135.00 FOOT RADIUS TANGENT CURVE TO THE LEFT, HAVING A CENTRAL ANGLE OF 37°13'35" AND A CHORD THAT BEARS N 20°21'02" W, 86.18 FEET TO THE SOUTHWEST CORNER OF LOT 15, BLOCK 3, SUNRISE RIDGE SUBDIVISION FILING NO. 8 AS RECORDED UNDER RECEPTION NO. 1722613 OF SAID RECORDS;
THENCE THE FOLLOWING TWO (2) COURSES ALONG THE EASTERLY LINE OF SAID SUNRISE RIDGE SUBDIVISION FILING NO. 8: 1) 511.39 FEET ALONG THE ARC OF A 1,034.60 FOOT RADIUS CURVE TO THE LEFT, HAVING A CENTRAL ANGLE OF 28°19'14" AND A CHORD THAT BEARS N 58°13'41" E, 506.20 FEET TO A POINT OF COMPOUND CURVATURE;
2) 283.12 FEET ALONG THE ARC OF A 500.00 FOOT RADIUS CURVE TO THE LEFT, HAVING A CENTRAL ANGLE OF 32°26'36" AND A CHORD THAT BEARS N 27°50'47" E, 279.35 FEET TO A POINT ON THE NORTH LINE OF SAID NORTHEAST QUARTER;
THENCE N 89°57'13" E ALONG THE NORTH LINE OF SAID NORTHEAST QUARTER, A DISTANCE OF 115.21 FEET TO THE POINT OF BEGINNING.

CONTAINING A CALCULATED AREA OF 445,104 SQUARE FEET (10.218 ACRES) OF LAND, MORE OR LESS.

TO BE PLATTED AS "COTTAGES AT MESA RIDGE"

STANDARD NOTES:

1. ALL DRAINAGE AND ROADWAY CONSTRUCTION SHALL MEET THE STANDARDS AND SPECIFICATIONS OF THE CITY OF COLORADO SPRINGS/EL PASO COUNTY DRAINAGE CRITERIA MANUAL, VOLUMES 1 AND 2, AND THE EL PASO COUNTY ENGINEERING CRITERIA MANUAL
2. CONTRACTOR SHALL BE RESPONSIBLE FOR THE NOTIFICATION AND FILED NOTIFICATION OF ALL EXISTING UTILITIES, WHETHER SHOWN ON THE PLANS OR NOT, BEFORE BEGINNING CONSTRUCTION. LOCATION OF EXISTING UTILITIES SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. CALL 811 TO CONTACT THE UTILITY NOTIFICATION CENTER OF COLORADO (UNCC)
3. CONTRACTOR SHALL KEEP A COPY OF THESE APPROVED PLANS, THE GRADING AND EROSION CONTROL PLAN, THE STORMWATER MANAGEMENT PLAN (SWMP), THE SOILS AND GEOTECHNICAL REPORT, AND THE APPROPRIATE DESIGN AND CONSTRUCTION STANDARDS AND SPECIFICATIONS AT THE JOB SITE AT ALL TIMES, INCLUDING THE FOLLOWING:
   A. EL PASO COUNTY ENGINEERING CRITERIA MANUAL (ECM)
   B. CITY OF COLORADO SPRINGS/EL PASO COUNTY DRAINAGE CRITERIA MANUAL, VOLUMES 1 AND 2
   C. COLORADO DEPARTMENT OF TRANSPORTATION (CDOT) STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION
   D. CDOT M & S STANDARDS
4. NOTWITHSTANDING ANYTHING DEPICTED IN THESE PLANS IN WORDS OR GRAPHIC REPRESENTATION, ALL DESIGN AND CONSTRUCTION RELATED TO ROADS, STORM DRAINAGE AND EROSION CONTROL SHALL CONFORM TO THE STANDARDS AND REQUIREMENTS OF THE MOST RECENT VERSION OF THE RELEVANT ADOPTED EL PASO COUNTY STANDARDS, INCLUDING THE LAND DEVELOPMENT CODE, THE ENGINEERING CRITERIA MANUAL, THE DRAINAGE CRITERIA MANUAL, AND THE DRAINAGE CRITERIA MANUAL VOLUME 2. ANY DEVIATIONS FROM REGULATIONS AND STANDARDS MUST BE REQUESTED, AND APPROVED, IN WRITING. ANY MODIFICATIONS NECESSARY TO MEET CRITERIA AFTER-THE-FACT WILL BE ENTIRELY THE DEVELOPER'S RESPONSIBILITY TO RECTIFY.
5. IT IS THE DESIGN ENGINEER'S RESPONSIBILITY TO ACCURATELY SHOW EXISTING CONDITIONS, BOTH ONSITE AND OFFSITE, ON THE CONSTRUCTION PLANS. ANY MODIFICATIONS NECESSARY DUE TO CONFLICTS, OMISSIONS, OR CHANGED CONDITIONS WILL BE ENTIRELY THE DEVELOPER'S RESPONSIBILITY TO RECTIFY.
6. CONTRACTOR SHALL SCHEDULE A PRE-CONSTRUCTION MEETING WITH EL PASO COUNTY PLANNING AND COMMUNITY DEVELOPMENT DEPARTMENT (PCD) - INSPECTIONS, PRIOR TO STARTING CONSTRUCTION.
7. IT IS THE CONTRACTOR'S RESPONSIBILITY TO UNDERSTAND THE REQUIREMENTS OF ALL JURISDICTIONAL AGENCIES AND TO OBTAIN ALL REQUIRED PERMITS, INCLUDING BUT NOT LIMITED TO EL PASO COUNTY EROSION AND STORMWATER QUALITY CONTROL PERMIT (ESQCP), REGIONAL BUILDING FLOODPLAIN DEVELOPMENT PERMIT, U.S. ARMY CORPS OF ENGINEERS-ISSUED 401 AND/OR 404 PERMITS, AND COUNTY AND STATE FUGITIVE DUST PERMITS.
8. CONTRACTOR SHALL NOT DEVIATE FROM THE PLANS WITHOUT FIRST OBTAINING WRITTEN APPROVAL FROM THE DESIGN ENGINEER AND PCD. CONTRACTOR SHALL NOTIFY THE DESIGN ENGINEER IMMEDIATELY UPON DISCOVERY OF ANY ERRORS OR INCONSISTENCIES.
9. ALL STORM DRAIN PIPE SHALL BE CLASS III RCP UNLESS OTHERWISE NOTED AND APPROVED BY PCD.
10. CONTRACTOR SHALL COORDINATE GEOTECHNICAL TESTING PER ECM STANDARDS. PAVEMENT DESIGN SHALL BE APPROVED BY EL PASO COUNTY PCD PRIOR TO PLACEMENT OF CURB AND GUTTER AND PAVEMENT.
11. ALL CONSTRUCTION TRAFFIC MUST ENTER/EXIT THE SITE AT APPROVED CONSTRUCTION ACCESS POINTS.
12. SIGHT VISIBILITY TRIANGLES AS IDENTIFIED IN THE PLANS SHALL BE PROVIDED AT ALL INTERSECTIONS. OBSTRUCTIONS GREATER THAN 18 INCHES ABOVE FLOWLINE ARE NOT ALLOWED WITHIN SIGHT TRIANGLES.
13. SIGNING AND STRIPING SHALL COMPLY WITH EL PASO COUNTY AND MUTCD CRITERIA. [IF APPLICABLE, ADDITIONAL SIGNING AND STRIPING NOTES WILL BE PROVIDED.]
14. CONTRACTOR SHALL OBTAIN ANY PERMITS REQUIRED BY EL PASO COUNTY DPW, INCLUDING WORK WITHIN THE RIGHT-OF-WAY AND SPECIAL TRANSPORT PERMITS.
15. THE LIMITS OF CONSTRUCTION SHALL REMAIN WITHIN THE PROPERTY LINE UNLESS OTHERWISE NOTED. THE OWNER/DEVELOPER SHALL OBTAIN WRITTEN PERMISSION AND EASEMENTS, WHERE REQUIRED, FROM ADJOINING PROPERTY OWNER(S) PRIOR TO ANY OFF-SITE DISTURBANCE, GRADING, OR CONSTRUCTION.



VICINITY MAP
SCALE: 1"=500'

GENERAL PROVISIONS:

1. STATEMENT OF INTENT: THE PURPOSE AND INTENT OF THE PUD ZONING DISTRICT IS TO CREATE A COHESIVE WELL PLANNED COMMUNITY THAT WILL ALLOW FOR A MAXIMUM OF 122 DWELLING UNITS, SINGLE FAMILY ATTACHED UNITS FOR RENT ONLY, AN AMENITY CENTER, AND OPEN SPACE.
2. AUTHORITY: THIS PUD IS AUTHORIZED BY CHAPTER 4 OF THE EL PASO COUNTY LAND DEVELOPMENT CODE, ADOPTED PURSUANT TO THE COLORADO PLANNED UNIT DEVELOPMENT ACT OF 1972, AS AMENDED.
3. APPLICABILITY: THE PROVISIONS OF THIS PUD SHALL RUN WITH THE LAND. THE LANDOWNERS, THEIR SUCCESSORS, HEIRS, OR ASSIGNS SHALL BE BOUND BY THE DEVELOPMENT PLAN, AS AMENDED AND APPROVED BY THE PLANNING AND COMMUNITY DEVELOPMENT DEPARTMENT DIRECTOR OR BOARD OF COUNTY COMMISSIONERS.
4. ADOPTION: THE ADOPTION OF THIS DEVELOPMENT PLAN SHALL EVIDENCED THE FINDINGS AND DECISIONS OF THE EL PASO COUNTY BOARD OF COUNTY COMMISSIONS THAT THIS DEVELOPMENT PLAN FOR THE COTTAGES AT MESA RIDGE IS IN GENERAL CONFORMITY WITH THE EL PASO COUNTY MASTER PLAN, EL PASO COUNTY POLICY PLAN, AND APPLICABLE SMALL AREA PLAN(S); IS AUTHORIZED UNDER THE PROVISIONS OF THE EL PASO COUNTY LAND DEVELOPMENT CODE; AND THAT THE EL PASO COUNTY LAND DEVELOPMENT CODE AND THIS DEVELOPMENT PLAN COMPLIES WITH THE COLORADO PLANNED UNIT DEVELOPMENT ACT OF 1972, AS AMENDED.
5. RELATIONSHIP TO COUNTY REGULATIONS: THE PROVISIONS OF THIS DEVELOPMENT PLAN SHALL PREVAIL AND GOVERN THE DEVELOPMENT OF THE COTTAGES AT MESA RIDGE, PROVIDED, HOWEVER, THAT WHERE THE PROVISIONS OF THIS DEVELOPMENT PLAN DO NOT ADDRESS A PARTICULAR SUBJECT THE RELEVANT PROVISIONS OF THE EL PASO COUNTY LAND DEVELOPMENT CODE, AS AMENDED AND IN EFFECT AT THE TIME OF THE PUD PLAN APPROVAL (OR OWNER ACKNOWLEDGE THE PUD CHANGES WITH THE CODE), OR ANY OTHER APPLICABLE RESOLUTIONS OR REGULATIONS OF EL PASO COUNTY, SHALL BE APPLICABLE.
6. ENFORCEMENT: TO FURTHER THE MUTUAL INTEREST OF THE RESIDENTS, OCCUPANTS, AND OWNERS OF THE PUD AND OF THE PUBLIC IN PRESERVATION OF THE INTEGRITY OF THIS DEVELOPMENT PLAN, THE PROVISIONS OF THIS PLAN RELATING TO THE USE OF LAND AND THE LOCATION OF COMMON SPACE SHALL RUN IN FAVOR OF EL PASO COUNTY AND SHALL BE ENFORCEABLE AT LAW OR IN EQUITY BY THE COUNTY WITHOUT LIMITATION ON ANY POWER OR REGULATION OTHERWISE GRANTED BY LAW. WHERE THERE IS MORE THAN ONE PROVISIONS WITHIN THE DEVELOPMENT PLAN THAT COVERS THE SAME SUBJECT MATTER, THE PROVISIONS WHICH IS MORE RESTRICTIVE OR IMPOSES THE HIGHER STANDARDS OR REQUIREMENTS SHALL GOVERN.

SHEET INDEX:

STAKEHOLDERS:

OWNER: CSJ NO 1 LLC
111 S. TEJON STREET, SUITE 222
COLORADO SPRINGS, CO 80903

DEVELOPER: GOODWIN KNIGHT
8605 EXPLORER DRIVE, SUITE 250
COLORADO SPRINGS, CO 80920
ATTN: DAVE MORRISON

APPLICANT: HR GREEN DEVELOPMENT, LLC
1975 RESEARCH PKWY, SUITE 230
COLORADO SPRINGS, CO 80920
ATTN: PHIL STUEPFERT, KEN HUHN

SURVEYOR: BARRON LAND, LLC
2790 N ACADEMY BLVD #311
COLORADO SPRINGS, CO 80917
ATTN: SPENCER BARRON

LEGEND

EXISTING / PROPOSED

MATCH LINE
PHASE LINE
SECTION LINE
PROPERTY LINE
EASEMENT LINE
RIGHT OF WAY
CENTERLINE
CHAIN LINK FENCE
WOODEN FENCE
ROD IRON FENCE
GUARDRAIL
CABLE TV
U.G. ELECTRIC
OVERHEAD ELECTRIC
FIBER OPTIC
GAS MAIN
SANITARY SEWER
STORM DRAIN
TELEPHONE
WATER MAIN
SWALE
TRAIL
CURB & GUTTER
DRAINAGE BASIN
INDEX CONTOUR
INTER. CONTOUR
100-YR FLOODPLAIN
FLOODWAY
EDGE OF WETLANDS

DRAINAGE

EXISTING / PROPOSED

DRAINAGE BASIN
BASIN TAG (I.D. AREA)
DESIGN POINT

STORM SEWER

EXISTING / PROPOSED

MANHOLE
STORM INLET
FLARED END SECTION
RIPRAP

SANITARY SEWER

CLEAN OUT
MANHOLE
PLUG

WATER

FIRE HYDRANT
FIRE DEPT. CONNECTION
GATE VALVE
MANHOLE
METER
TEE
REDUCER

DRY UTILITIES

ELECTRIC METER
ELECTRIC PEDESTAL
ELECTRICAL CABINET
ELECTRIC VAULT
FIBER OPTIC PULL BOX
FIBER OPTIC MANHOLE
FIBER OPTIC PEDESTAL
FIBER OPTIC SIGN
FIBER OPTIC VAULT
GAS METER
GAS SIGN
GAS VAULT
TELEPHONE CABINET
TELEPHONE MANHOLE
TELEPHONE SIGNAL/MAST
TELEPHONE SIGN
TELEPHONE PEDESTAL
TRANSFORMER
LIGHT POLE
FIBER OPTIC VAULT

MISCELLANEOUS

SIGN
BOLLLARD
ACCESSIBLE PARKING

DEVELOPERS STATEMENT - FOUNTAIN SANITATION DISTRICT

THE OWNER WILL COMPLY WITH THE REQUIREMENTS OF FOUNTAIN SANITATION DISTRICT REGULATIONS AND STANDARD SPECIFICATIONS. OWNER WILL COMPLY WITH THE CONSTRUCTION DRAWINGS PREPARED BY HIS/HER CIVIL ENGINEER.

DEVELOPER/OWNER SIGNATURE: _____ DATE: _____
NAME OF DEVELOPER/OWNER: _____
TITLE: _____
PHONE: _____
ADDRESS: _____

FOUNTAIN SANITATION DISTRICT

PLANS ARE RECOMMENDED FOR USE IN CONSTRUCTION OF WASTEWATER COLLECTION SYSTEM FOR THIS PROJECT.
DESIGN ENGINEER OF RECORD TAKES SOLE RESPONSIBILITY FOR ALL DESIGN ASPECTS OF THE PROJECT.

_____ _____ _____
JONATHAN MOORE, P.E. DATE
FOUNTAIN SANITATION DISTRICT - DISTRICT ENGINEER

HR GREEN: ADDRESSED

add owner's name Unresolved.

HR GREEN: ADDRESSED

Please revise to Joshua Palmer

EL PASO COUNTY STATEMENT

COUNTY PLAN REVIEW IS PROVIDED ONLY FOR GENERAL CONFORMANCE WITH COUNTY DESIGN CRITERIA. THE COUNTY IS NOT RESPONSIBLE FOR THE ACCURACY AND ADEQUACY OF THE DESIGN, DIMENSIONS, AND/OR ELEVATIONS WHICH SHALL BE CONFIRMED AT THE JOB SITE. THE COUNTY THROUGH THE APPROVAL OF THIS DOCUMENT ASSUMES NO RESPONSIBILITY FOR COMPLETENESS AND/OR ACCURACY OF THIS DOCUMENT.

FILED IN ACCORDANCE WITH THE REQUIREMENTS OF THE EL PASO COUNTY LAND DEVELOPMENT CODE, DRAINAGE CRITERIA MANUAL VOLUMES 1 AND 2 & ENGINEERING CRITERIA MANUAL AS AMENDED.

IN ACCORDANCE WITH ECM SECTION 1.12, THESE CONSTRUCTION DOCUMENTS WILL BE VALID FOR CONSTRUCTION FOR A PERIOD OF 2 YEARS FROM THE DATE SIGNED BY THE EL PASO COUNTY ENGINEER. IF CONSTRUCTION HAS NOT STARTED WITHIN THOSE 2 YEARS, THE PLANS WILL NEED TO BE RESUBMITTED FOR APPROVAL, INCLUDING PAYMENT OF REVIEW FEES AT THE PLANNING AND COMMUNITY DEVELOPMENT DIRECTORS DISCRETION.

_____ _____
JENNIFER IRVINE, P.E. DATE
COUNTY ENGINEER/ ECM ADMINISTRATOR

OWNER'S STATEMENT

I, THE OWNER/DEVELOPER HAVE READ AND WILL COMPLY WITH THE REQUIREMENTS OF THE GRADING AND EROSION CONTROL PLAN AND ALL OF THE REQUIREMENTS SPECIFIED IN THESE DETAILED PLANS AND SPECIFICATIONS.

_____ _____
OWNER SIGNATURE DATE
_____
OWNER NAME

ENGINEER'S STATEMENT

THESE DETAILED PLANS AND SPECIFICATIONS WERE PREPARED UNDER MY DIRECTION AND SUPERVISION. SAID PLANS AND SPECIFICATIONS HAVE BEEN PREPARED ACCORDING TO THE CRITERIA ESTABLISHED BY THE COUNTY FOR DETAILED ROADWAY, DRAINAGE, GRADING AND EROSION CONTROL PLANS AND SPECIFICATIONS, AND SAID PLANS AND SPECIFICATIONS ARE IN CONFORMITY WITH APPLICABLE MASTER DRAINAGE PLANS AND MASTER TRANSPORTATION PLANS. SAID PLANS AND SPECIFICATIONS MEET THE PURPOSES FOR WHICH THE PARTICULAR ROADWAY AND DRAINAGE FACILITIES ARE DESIGNED AND ARE CORRECT TO THE BEST OF MY KNOWLEDGE AND I ACCEPT RESPONSIBILITY FOR ANY LIABILITY CAUSED BY ANY NEGLIGENT ACTS, ERRORS OR OMISSIONS ON MY PART IN PREPARATION OF THESE DETAILED PLANS AND SPECIFICATIONS.

_____ _____
KENNETH M. HUHN, P.E. DATE
KHUHN@HRGREEN.COM
COLORADO P.E. 0054022

NOT FOR CONSTRUCTION

PCD FILNE NO.: SF2214

DRAWN BY: CBM	JOB DATE: 8/22/2022	BAR IS ONE INCH ON OFFICIAL DRAWINGS. 0 1" IF NOT ONE INCH, ADJUST SCALE ACCORDINGLY.	
APPROVED: KMH	JOB NUMBER: 200541		
CAD DATE: 8/31/2022			
CAD FILE: J:\2020\200541\CAD\Dwgs\C\CD\EI _Paso_Co\Cover			

NO.	DATE	BY	REVISION DESCRIPTION

HRGreen
HR GREEN - COLORADO SPRINGS
7222 COMMERCE CENTER DR SUITE 220
COLORADO SPRINGS CO 80919
PHONE: 719.300.4140 TOLL FREE: 800.728.7805
FAX: 844.273.1057 | HRGreen.com

THE COTTAGES AT MESA RIDGE
GOODWIN KNIGHT
EL PASO COUNTY, COLORADO

GOODWIN KNIGHT

EL PASO COUNTY CONSTRUCTION DOCUMENTS
COVER

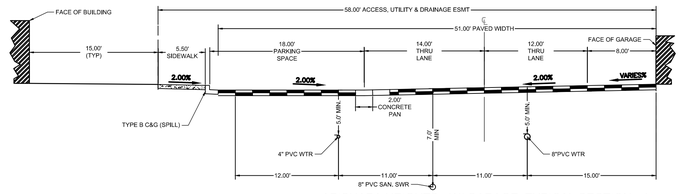
SHEET CV

1

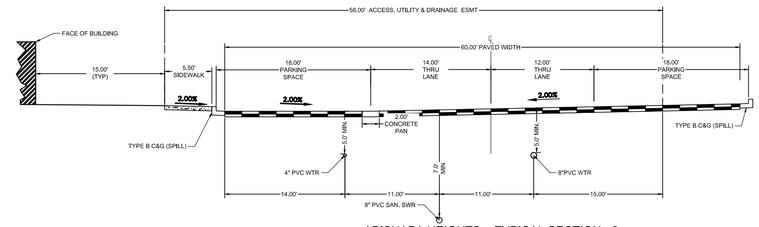
GRADING AND EROSION CONTROL NOTES:

1. STORMWATER DISCHARGES FROM CONSTRUCTION SITES SHALL NOT CAUSE OR THREATEN TO CAUSE POLLUTION, CONTAMINATION, OR DEGRADATION OF STATE WATERS. ALL WORK AND EARTH DISTURBANCE SHALL BE DONE IN A MANNER THAT MINIMIZES POLLUTION OF ANY ON–SITE OR OFF–SITE WATERS, INCLUDING WETLANDS.
2. NOTWITHSTANDING ANYTHING DEPICTED IN THESE PLANS IN WORDS OR GRAPHIC REPRESENTATION, ALL DESIGN AND CONSTRUCTION RELATED TO ROADS, STORM DRAINAGE, AND EROSION CONTROL SHALL CONFORM TO THE STANDARDS AND REQUIREMENTS OF THE MOST RECENT VERSION OF THE RELEVANT ADOPTED EL PASO COUNTY STANDARDS, INCLUDING THE CRITERIA MANUAL VOLUME 2. ANY DEVIATIONS FROM REGULATIONS AND STANDARDS MUST BE REQUESTED, AND APPROVED, IN WRITING.
3. A SEPARATE STORMWATER MANAGEMENT PLAN (SWMP) FOR THIS PROJECT SHALL BE COMPLETED AND AN EROSION AND STORMWATER QUALITY CONTROL PERMIT (ESQCP) ISSUED PRIOR TO COMMENCITNG CONSTRUCTION. MANAGEMENT OF THE SWMP DURING CONSTRUCTION IS THE RESPONSIBILITY OF THE DESIGNATED QUALIFIED STORMWATER MANAGER OF CERTIFIED EROSION CONTROL INSPECTOR. THE SWMP SHALL BE LOCATED ON SITE AT ALL TIMES DURING CONSTRUCTION AND SHALL BE KEPT UP TO DATE WITH WORK PROGRESS AND CHANGES IN THE FIELD.
4. ONCE THE ESQCP IS APPROVED AND A "NOTICE TO PROCEED" HAS BEEN ISSUED, THE CONTRACTOR MAY INSTALL THE INITIAL STAGE EROSION AND SEDIMENT CONTROL MEASURES AS INDICATED ON THE APPROVED GEC. A PRECONSTRUCTION MEETING BETWEEN THE CONTRACTOR, ENGINEER, AND THE EL PASO COUNTY WILL BE HELD PRIOR TO ANY CONSTRUCTION. IT IS THE RESPONSIBILITY OF THE APPLICANT TO COORDINATE THE MEETING TIME AND PLACE WITH COUNTY STAFF.
5. CONTROL MEASURES MUST BE INSTALLED PRIOR TO COMMENCEMENT OF ACTIVITIES THAT COULD CONTRIBUTE POLLUTANTS TO STORMWATER. CONTROL MEASURES FOR ALL SLOPES, CHANNELS, DITCHES, AND DISTURBED LAND AREAS SHALL BE INSTALLED IMMEDIATELY UPON COMPLETION OF THE DISTURBANCE.
6. ALL TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES SHALL BE MAINTAINED AND REMAIN IN EFFECTIVE OPERATION CONDITION UNTIL PERMANENT SOIL EROSION CONTROL MEASURES ARE IMPLEMENTED AND FINAL STABILIZATION IS ESTABLISHED. ALL PERSONS ENGAGED IN LAND DISTURBANCE ACTIVITIES SHALL ASSESS THE ADEQUACY OF CONTROL MEASURES AT THE SITE AND IDENTIFY IF CHANGES TO THOSE CONTROL MEASURES ARE NEEDED TO ENSURE THE CONTINUED EFFECTIVE PERFORMANCE OF THE CONTROL MEASURES. ALL CHANGES TO TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES MUST BE INCORPORATED INTO THE STORMWATER MANAGEMENT PLAN.
7. TEMPORARY STABILIZATION SHALL BE IMPLEMENTED ON DISTURBED AREAS AND STOCKPILES WHERE GROUND DISTURBING ACTIVITY HAS PERMANENTLY CEASED OR TEMPORARILY CEASED FOR LONGER THAN 14 DAYS
8. FINAL STABILIZATION MUST BE IMPLEMENTED AT ALL APPLICABLE CONSTRUCTION SITES. FINAL STABILIZATION IS ACHIEVED WHEN ALL GROUND DISTURBING ACTIVITIES ARE COMPLETE AND ALL DISTURBED AREAS EITHER HAVE A UNIFORM VEGETATIVE COVER WITH INDIVIDUAL PLANT DENSITY OF 70 PERCENT OF PRE–DISTURBANCE LEVELS ESTABLISHED OR EQUIVALENT PERMANENT ALTERNATIVE STABILIZATION METHOD IS IMPLEMENTED. ALL TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES SHALL BE REMOVED UPON FINAL STABILIZATION AND BEFORE PERMIT CLOSURE.
9. ALL PERMANENT STORMWATER FACILITIES SHALL BE INSTALLED AS DESIGNED IN THE APPROVED PLANS. ANY PROPOSED CHANGES THAT EFFECT THE DESIGN OF FUNCTION OF PERMANENT STORMWATER MANAGEMENT STRUCTURES MUST BE APPROVED BY THE ECM ADMINISTRATOR PRIOR TO IMPLEMENTATION.
10. EARTH DISTURBANCES SHALL BE CONDUCTED IN SUCH A MANNER AS TO EFFECTIVELY MINIMIZE ACCELERATED SOIL EROSION AND RESULTING SEDIMENTATION. ALL DISTURBANCES HALL BE DESIGNED, CONSTRUCTED, AND COMPLETED SO THAT THE EXPOSED AREA OF ANY DISTURBED LAND SHALL BE LIMITED TO THE SHORTEST PRACTICAL PERIOD OF TIME. PRE–EXISTING VEGETATION SHALL BE PROTECTED AND MAINTAINED WITHIN 50 HORIZONTAL FEET OF A WATERS OF THE STATE UNLESS SHOWN TO BE INFEASIBLE AND SPECIFICALLY REQUESTED AND APPROVED.
11. COMPACTION OF SOIL MUST BE PREVENTED IN AREAS DESIGNATED FOR INFILTRATION CONTROL MEASURES OF WHERE FINAL STABILIZATION WILL BE ACHIEVED BY VEGETATIVE COVER. AREAS DESIGNATED FOR INFILTRATION CONTROL MEASURES SHALL ALSO BE PROTECTED FROM SEDIMENTATION DURING CONSTRUCTION UNTIL FINAL STABILIZATION IS ACHIEVED. IF COMPACTION PREVENTION IS NOT FEASIBLE DUE TO SITE CONSTRAINTS, ALL ARES DESIGNATED FOR INFILTRATION AND VEGETATION CONTROL MEASURES MUST BE LOOSENED PRIOR TO INSTALLATION OF THE CONTROL MEASURE(S)
12. ANY TEMPORARY OR PERMANENT FACILITY DESIGNED AND CONSTRUCTED FOR THE CONVEYANCE OF STORMWATER AROUND, THROUGH, OR FROM THE EARTH DISTURBANCE AREA SHALL BE A STABILIZED CONVEYANCE DESIGNED TO MINIMIZE EROSION AND THE DISCHARGE OF SEDIMENT OFF SITE.
13. CONCRETE WASH WATER SHALL BE CONTAINED AND DISPOSED OF IN ACCORDANCE WITH THE SWMP. NO WASH WATER SHALL BE DISCHARGED TO OR ALLOWED TO ENTER STATE WATERS, INCLUDING ANY SURFACE OR SUBSURFACE STORM DRAINAGE SYSTEM OR FACILITIES. CONCRETE WASHOUTS SHALL NOT BE LOCATED IN AN AREA WHERE SHALLOW GROUNDWATER MAY BE PRESENT, OR WITHIN 50 FEET OF A SURFACE WATER BODY, CREEK OR STREAM.
14. DURING DEWATERING OPERATIONS OF UNCONTAMINATED GROUND WATER MAY BE DISCHARGED ON SITE, BUT SHALL NOT LEAVE THE SITE IN THE FORM OF SURFACE RUNOFF UNLESS AN APPROVED STATE DEWATERING PERMIT IS IN PLACE.
15. EROSION BLANKET OR OTHER PROTECTIVE COVERING SHALL BE USED ON SLOPES STEEPER THAN 3:1.
16. CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL WASTES FROM THE CONSTRUCTION SITE FOR DISPOSAL IN ACCORDANCE WITH LOCAL AND STATE REGULATORY REQUIREMENTS. NO CONSTRUCTION DEBRIS, TREE SLASH, BUILDING MATERIAL WASTES OR UNUSED BUILDING MATERIALS SHALL BE BURIED, DUMPED OR DISCHARGED AT THIS SITE.
17. WASTE MATERIALS SHALL NOT BE TEMPORARILY PLACED OR STORED IN THE STREET, ALLEY OR OTHER PUBLIC WAY, UNLESS IN ACCORDANCE WITH AN APPROVED TRAFFIC CONTROL PLAN. CONTROL MEASURES MAY BE REQUIRED BY EL PASO COUNTY ENGINEERING IF DEEMED NECESSARY, BASED ON SPECIFIC CONDITIONS AND CIRCUMSTANCES.
18. TRACKING OF SOILS AND CONSTRUCTION DEBRIS OFF–SITE SHALL BE MINIMIZED. MATERIALS TRACKED OFF–SITE SHALL BE CLEANED UP PROPERLY AND PROPERLY DISPOSED OF IMMEDIATELY.
19. THE OWNER/DEVELOPER SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL CONSTRUCTION, DEBRIS, DIRT, TRASH, ROCK, SEDIMENT, SOIL AND SAND THAT MAY ACCUMULATE IN ROADS, STORM DRAINS AND OTHER DRAINAGE CONVEYANCE SYSTEMS AND STORMWATER APPURTENANCES AS A RESULT OF THE SITE DEVELOPMENT.
20. THE QUANTITY OF MATERIALS STORED ON THE PROJECT SITE SHALL BE LIMITED, AS MUCH AS PRACTICAL, TO THAT QUANTITY REQUIRED TO PERFORM THE WORK IN AN ORDERLY SEQUENCE. ALL MATERIALS STORED ON–SITE SHALL BE STORED IN AN EAT, ORDERLY MANNER, IN THEIR ORIGINAL CONTAINERS, WITH ORIGINAL MANUFACTURER'S LABEL.
21. NO CHEMICAL(S) HAVING THE POTENTIAL TO BE RELEASED IN STORMWATER ARE TO BE STORED OR USED ONSITE UNLESS PERMISSION FOR THE USE OF SUCH CHEMICAL(S) IS GRANTED IN WRITING BY THE ECM ADMINISTRATOR. IN GRANTING APPROVAL FOR THE USE OF SUCH CHEMICAL(S) SPECIAL CONDITIONS AND MONITORING MAY BE REQUIRED.
22. BULK STORAGE OF ALLOWED PETROLEUM PRODUCTS OR OTHER ALLOWED LIQUID CHEMICALS IN EXCESS OF 55 GALLONS SHALL REQUIRED ADEQUATE SECONDARY PROTECTION TO CONTAIN AL SPILLS ONSITE AND TO PREVENT ANY SPILLED MATERIALS FROM ENTERING STATE WATERS, ANY SURFACE OR SUBSURFACE STORM DRAINAGE SYSTEM OR OTHER FACILITIES.
23. NO PERSON SHALL CAUSE THE IMPEDIMENT OF STORMWATER FLOW IN THE CURB AND GUTTER OR DITCH EXCEPT WITH APPROVED SEDIMENT CONTROL MEASURES.
24. OWNER/DEVELOPER AND THEIR AGENTS SHALL COMPLY WITH THE "COLORADO WATER QUALITY CONTROL ACT" (TITLE 25, ARTICLE 8, CRS) AND THE "CLEAN WATER ACT" (33 USC 1344), IN ADDITION TO THE REQUIREMENTS OF THE LAND DEVELOPMENT CODE, DCM VOLUME II AND ECM APPENDIX I. ALL APPROPRIATE PERMITS MUST BE OBTAINED BY THE CONTRACTOR PRIOR TO CONSTRUCTION (1041, NPDES, FLOODPLAIN, 404, FUGITIVE DUST, ETC). IN THE EVENT OF CONFLICTS BETWEEN THESE REQUIREMENTS AND OTHER LAWS RULES OR REGULATIONS OF OTHER FEDERAL, STATE, LOCAL OR COUNTY AGENCIES, THE MOST RESTRICTIVE LAWS, RULES OR REGULATIONS SHALL APPLY.
25. ALL CONSTRUCTION TRAFFIC MUST ENTER/EXIT THE SITE ONLY AT APPROVED CONSTRUCTION ACCESS POINTS.
26. PRIOR TO CONSTRUCTION THE PERMITEE SHALL VERIFY THE LOCATION OF EXISTING UTILITIES.
27. A WATER SOURCE SHALL BE AVAILABLE ON SITE DURING EARTHWORK OPERATIONS AND SHALL BE UTILIZED AS REQUIRED TO MINIMIZE DUST FROM EARTHWORK EQUIPMENT AND WIND.
28. THE SOILS REPORT FOR THE SITE HAS BEEN PREPARED BY ENTECH ENGINEERING, INC. AND SHALL BE CONSIDERED A PART OF THESE PLANS.
29. AT LEAST (10) DAYS PRIOR TO THE ANTICIPATED START OF CONSTRUCTION, FOR PROJECTS THAT WILL DISTURB ONE (1) ACRE OR MORE, THE OWNER OR OPERATOR OF CONSTRUCTION ACTIVITY SHALL SUBMIT A PERMIT APPLICATION FOR STORMWATER DISCHARGE TO THE COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT, WATER QUALITY DIVISION. THE APPLICATION CONTAINS CERTIFICATION OF COMPLETION OF A STORMWATER MANAGEMENT PLAN (SWMP), OF WHICH THIS GRADING AND EROSION CONTROL PLAN MAY BE A PART. FOR INFORMATION OR APPLICATION MATERIALS CONTACT:

COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT
WATER QUALITY CONTROL DIVISION
WQCD – PERMITS
4300 CHERR CREEK DRIVE SOUTH
DENVER, CO 80246–1530
ATTN: PERMITS UNIT



APISHAPA HEIGHTS - W/ GARAGE TYPICAL SECTION - 1
(PRIVATE DRIVEWAY)



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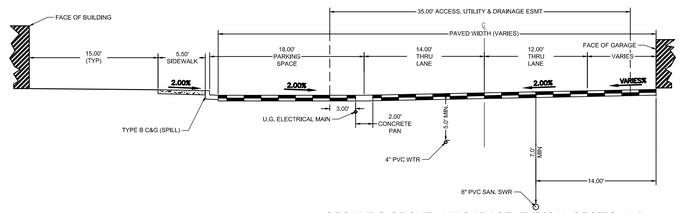
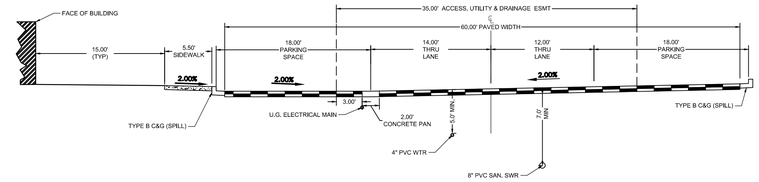
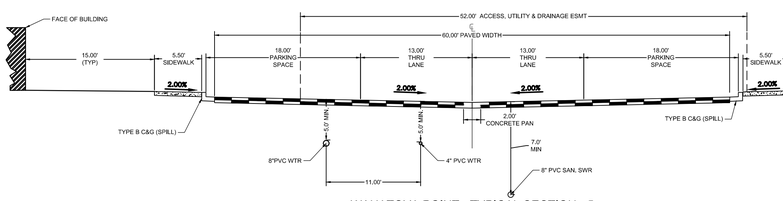
(PRIVATE DRIVEWAY)



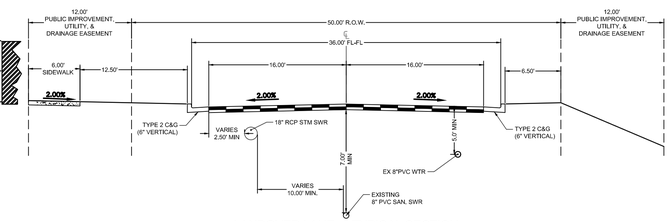
SEGUNDO GROVE - W/ GARAGE TYPICAL SECTION - 3
(PRIVATE DRIVEWAY)



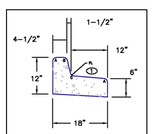
SEGUNDO GROVE - TYPICAL SECTION - 4
(PRIVATE DRIVEWAY)



WAHATOYA POINT - TYPICAL SECTION - 5
(PRIVATE DRIVEWAY)

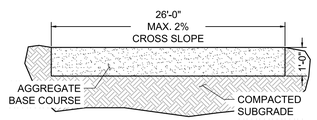


LANDOVER LANE - TYPICAL SECTION
(PUBLIC LOCAL - CITY OF FOUNTAIN)

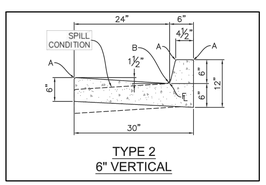


EPC TYPE B

CD – GUTTER CROSS SLOPES SHALL BE 1/2 IN./FT. WHEN DRAINING AWAY FROM CURB AND 1 IN./FT. WHEN DRAINING TOWARD CURB (WITH EXCEPTION TO BE SUBSTANTIALLY ADJACENT TO CURB RETURNS PER EPC CURB RAMP STANDARDS FOR SLOPE REQUIREMENTS).



26' FIRE ACCESS ROAD TYPICAL SECTION
SCALE: NTS



TYPE 2
6" VERTICAL

NOT FOR CONSTRUCTION

PCD FILNE NO.: SF2214

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APPROVED: KMH	JOB NUMBER: 200541	IF NOT ONE INCH, ADJUST SCALE ACCORDINGLY.
CAD DATE: 9/1/2022		
CAD FILE: J:\2020\200541\CAD\Dwgs\C\CD\EI _Paso_Co\Cover		

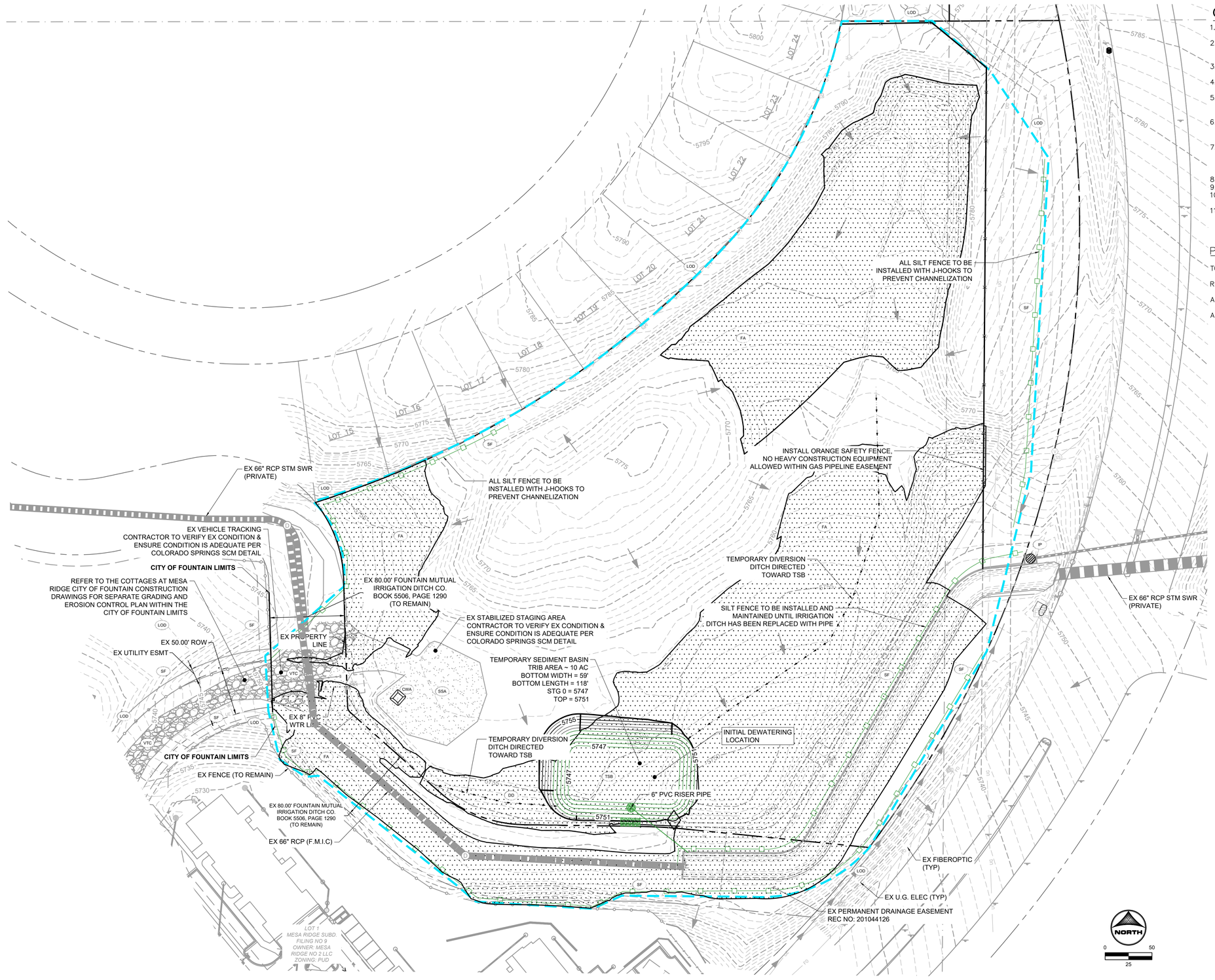
NO.	DATE	BY	REVISION DESCRIPTION

HRGreen
HR GREEN - COLORADO SPRINGS
7222 COMMERCE CENTER DR SUITE 220
COLORADO SPRINGS CO 80919
PHONE: 719.300.4140 TOLL FREE: 800.728.7805
FAX: 844.273.1057 | HRGreen.com

THE COTTAGES AT MESA RIDGE
GOODWIN KNIGHT
EL PASO COUNTY, COLORADO

EL PASO COUNTY CONSTRUCTION DOCUMENTS
GEC NOTES & TYPICAL SECTIONS

SHEET TS



GRADING & EROSION CONTROL PLAN NOTES:

1. SEE SHEETS 28 –31 FOR CITY OF COLORADO SPRINGS GRADING AND EROSION CONTROL DETAILS.
2. ALL STORMWATER MANAGEMENT MEASURES SHOWN ON THIS PLAN MUST BE INSTALLED AND MAINTAINED PER THE COLORADO SPRINGS STORMWATER CONSTRUCTION MANUAL; LATEST REVISIONS.
3. AREA WITHIN LIMITS OF DISTURBANCE TO BE CLEARED, GRUBBED AND STOCKPILED PRIOR TO IMPORT OF ANY FILL.
4. ALL 3:1 SLOPES MUST BE RECEIVE SLOPE TRACKING TREATMENT AND EROSION CONTROL BLANKET.
5. STOCKPILES REQUIRED DURING ONSITE CONSTRUCTION ACTIVITIES WILL BE PLACED AT THE DISCRETION OF THE CONTRACTOR. STOCKPILING OF MATERIAL MUST NOT OCCUR OUTSIDE THE LIMITS OF DISTURBANCE SHOWN ON THIS PLAN.
6. NON–STRUCTURAL CONTROLS (I.E. STREET SWEEPING) WILL BE AT THE DISCRETION OF THE PROJECT'S CERTIFIED GEC ADMINISTRATOR THROUGHOUT THE DURATION OF LAND DISTURBING ACTIVITIES.
7. THERE ARE NO ANTICIPATED ASPHALT AND/OR CONCRETE BATCH PLANTS, OR MASONRY MIX STATIONS ASSOCIATED WITH THIS PROJECT. IF THE CONTRACTOR REQUIRES A ASPHALT/CONCRETE BATCH PLANTS OR MASONRY MIX STATIONS, THESES PLANS WILL BE AMENDED AS REQUIRED.
8. THERE ARE NO EXISTING PRESERVATION EASEMENTS LOCATED ON SITE.
9. THE SITE IS NOT LOCATED IN THE FEMA 100–YR FLOODPLAIN
10. ONSITE EXISTING VEGETATION IS NATIVE GRASSES AND WEEDS. THERE IS NO NOTABLE VEGETATION OTHERWISE.
11. PROPOSED VEGETATION IS FOUND IN LANDSCAPE PLANS OF THE CONSTRUCTION DRAWINGS

PROJECT INFO:

TOTAL DISTURBANCE AREA = 11.33 AC

RECEIVING WATERS: JIMMY CAMP CREEK

ANTICIPATED START OF CONSTRUCTION: SPRING 2022

ANTICIPATED END OF LAND DISTURBANCE: WINTER 2022

GEC LEGEND:

CWA	CONCRETE WASHOUT AREA
CF	CONSTRUCTION FENCE
DD	DIVERSION DITCH
IP	INLET PROTECTION
CIP	CULVERT INLET PROTECTION
SCL	SEDIMENT CONTROL LOG
SF	SILT FENCE
SSA	STABILIZED STAGING AREA
SP	STOCKPILE MANAGEMENT
VTC	VEHICLE TRACKING CONTROL
LOD	LIMITS OF CONSTRUCTION/ DISTURBANCE
SM	SEEDING AND MULCHING
FA	FILL AREA (ALL OTHER AREAS ARE CUT)
RS	ROCK SOCK
TSB	TEMPORARY SEDIMENT BASIN
ECB	EROSION CONTROL BLANKET
TW/BW	ELEVATION OF TOP/BOTTOM OF WALL
	PROP FLOW DIRECTION
	EX FLOW DIRECTION
	EX PROPERTY LINE
	EX RIGHT OF WAY

NOT FOR CONSTRUCTION

PCD FILNE NO.: SF2214

DRAWN BY: CBM	JOB DATE: 8/31/2022	BAR IS ONE INCH ON OFFICIAL DRAWINGS. 0 1"	
APPROVED: KMH	JOB NUMBER: 200541	IF NOT ONE INCH, ADJUST SCALE ACCORDINGLY.	
CAD DATE: 8/31/2022			
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NO.	DATE	BY	REVISION DESCRIPTION

HRGreen
HR GREEN - COLORADO SPRINGS
7222 COMMERCE CENTER DR SUITE 220
COLORADO SPRINGS CO 80919
PHONE: 719.300.4140 TOLL FREE: 800.728.7805
FAX: 844.273.1057 | HRGreen.com

THE COTTAGES AT MESA RIDGE
GOODWIN KNIGHT
EL PASO COUNTY, COLORADO

GOODWIN KNIGHT

EL PASO COUNTY CONSTRUCTION DOCUMENTS
GEC- INITIAL PLAN

SHEET EC 3

GRADING & EROSION CONTROL PLAN NOTES:

1. SEE SHEETS 28 –31 FOR CITY OF COLORADO SPRINGS GRADING AND EROSION CONTROL DETAILS.
2. ALL STORMWATER MANAGEMENT MEASURES SHOWN ON THIS PLAN MUST BE INSTALLED AND MAINTAINED PER THE COLORADO SPRINGS STORMWATER CONSTRUCTION MANUAL; LATEST REVISIONS.
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11. PROPOSED VEGETATION IS FOUND IN LANDSCAPE PLANS OF THE CONSTRUCTION DRAWINGS

PROJECT INFO:

TOTAL DISTURBANCE AREA = 11.33 AC

RECEIVING WATERS: JIMMY CAMP CREEK

ANTICIPATED START OF CONSTRUCTION: SPRING 2022

ANTICIPATED END OF LAND DISTURBANCE: WINTER 2022

GEC LEGEND:

CWA	CONCRETE WASHOUT AREA
CF	CONSTRUCTION FENCE
DD	DIVERSION DITCH
IP	INLET PROTECTION
CIP	CULVERT INLET PROTECTION
SCL	SEDIMENT CONTROL LOG
SF	SILT FENCE
SSA	STABILIZED STAGING AREA
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TSB	TEMPORARY SEDIMENT BASIN
ECB	EROSION CONTROL BLANKET
TW/BW	ELEVATION OF TOP/BOTTOM OF WALL
	PROP FLOW DIRECTION
	EX FLOW DIRECTION
	EX PROPERTY LINE
	EX RIGHT OF WAY

NOT FOR CONSTRUCTION

PCD FILNE NO.: SF2214

DRAWN BY: CBM	JOB DATE: 8/31/2022	BAR IS ONE INCH ON OFFICIAL DRAWINGS. 0 1" IF NOT ONE INCH, ADJUST SCALE ACCORDINGLY.	
APPROVED: KMH	JOB NUMBER: 200541		
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NO.	DATE	BY	REVISION DESCRIPTION

HRGreen
HR GREEN - COLORADO SPRINGS
7222 COMMERCE CENTER DR SUITE 220
COLORADO SPRINGS CO 80919
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EL PASO COUNTY, COLORADO

GOODWIN KNIGHT

EL PASO COUNTY CONSTRUCTION DOCUMENTS
GEC- INTERIM PLAN

SHEET EC

HUHN, KEN, 8/31/2022 5:35 PM

GEC LEGEND:

	CWA	CONCRETE WASHOUT AREA
	CF	CONSTRUCTION FENCE
	DD	DIVERSION DITCH
	IP	INLET PROTECTION
	CIP	CULVERT INLET PROTECTION
	SCL	SEDIMENT CONTROL LOG
	SF	SILT FENCE
	SSA	STABILIZED STAGING AREA
	SP	STOCKPILE MANAGEMENT
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	ECB	EROSION CONTROL BLANKET
TW/BW		ELEVATION OF TOP/BOTTOM OF WALL
		PROP FLOW DIRECTION
		EX FLOW DIRECTION
		EX PROPERTY LINE
		EX RIGHT OF WAY

HR GREEN: ADDRESSED

adjust title block unresolved.

CBM 8/31/2022
KMH 200541
8/31/2022
J:\2020\200541\CAD\Dwgs\C\CD\El _Paso_Co\GEC\GEC_Vertical

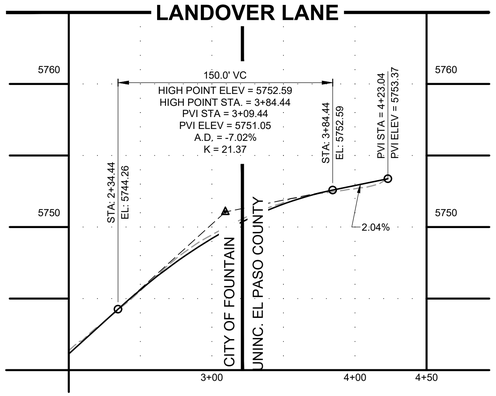
EL PASO COUNTY CONSTRUCTION DOCUMENTS

GEC- VERTICAL PLAN

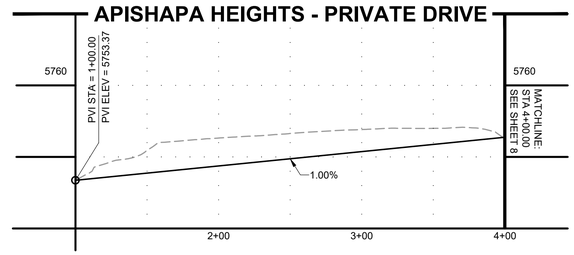
EC 5

HR GREEN Xrefs: xv-dsgn; xv-dsgn-apts; xv-row-apts; xv-util; xv-util-apts; xv-row; gec_legend; GEC_Initial; xc-row; xc-dsgn; xc-dsgn-ltn; GEC_Interim; xc-util; gec_plan_notes_EPC; xgl-1-arch dh31-CDs_EPC

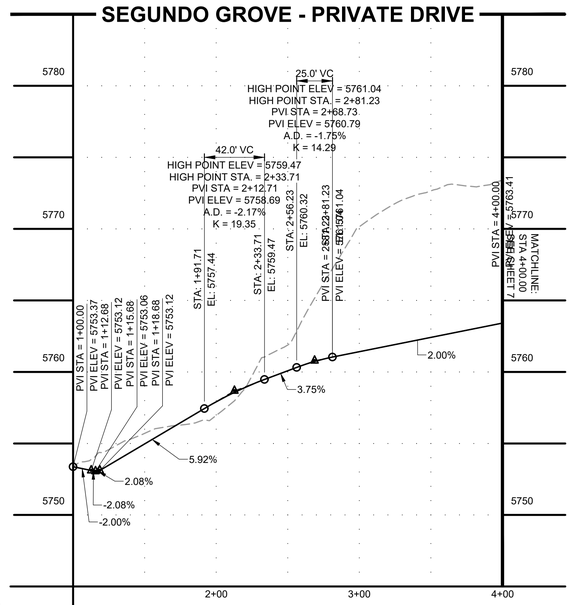
LANDOVER LANE



APISHAPA HEIGHTS - PRIVATE DRIVE



SEGUNDO GROVE - PRIVATE DRIVE

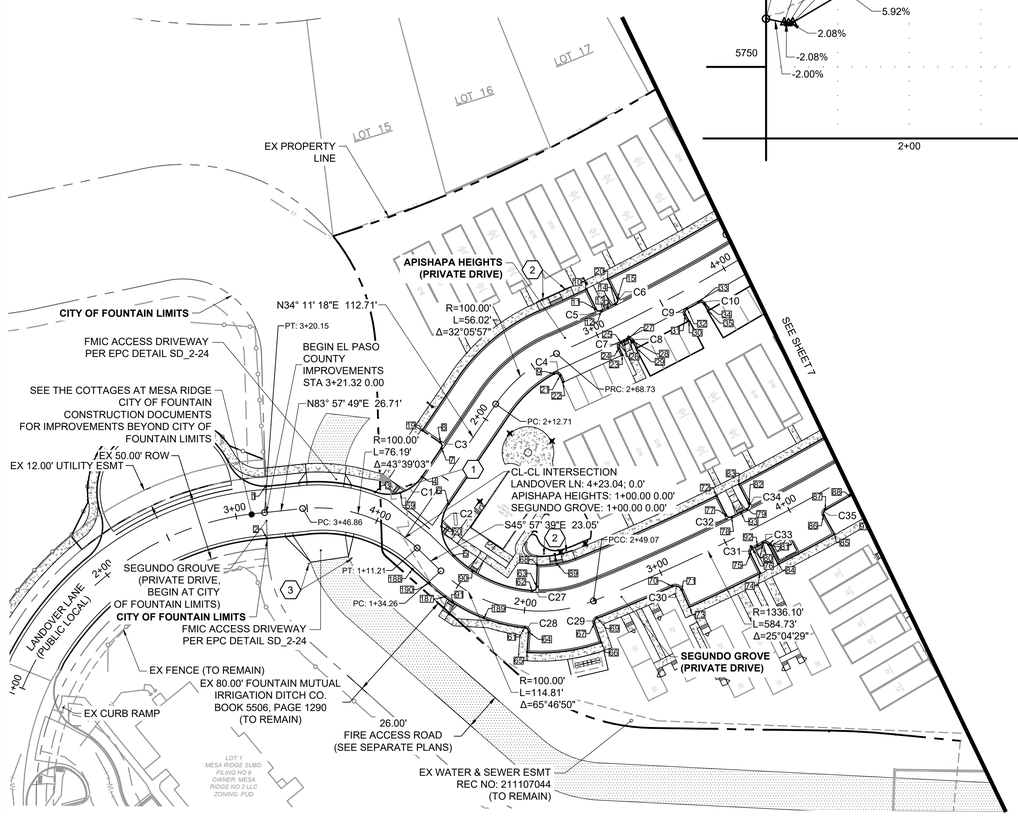


0 50
HORIZONTAL

0 5
VERTICAL

POINT TABLE					
No.	DESC.	ALIGNMENT	STATION	OFFSET	FL EL.
1	MATCH EX±/BEGIN T2 C&G	LANDOVER LN	STA 3+22.73	18.0' L	5750.38
2	MATCH EX±/BEGIN T2 C&G	LANDOVER LN	STA 3+20.15	18.0' R	5749.90
3	PCR	LANDOVER LN	STA 3+92.13	18.0' L	5752.24
4	PCR/ BEGIN TYPE B C&G (CATCH)	APISHAPA HEIGHTS	STA 1+41.66	14.0' L	5753.91
5	PCR/ BEGIN TYPE B C&G (CATCH)	APISHAPA HEIGHTS	STA 1+08.73	35.2' R	5753.34
6	PCR	APISHAPA HEIGHTS	STA 1+36.32	12.0' R	5754.12
7	PC/ END CATCH CURB	APISHAPA HEIGHTS	STA 1+65.86	14.0' L	5755.57
8	PT	APISHAPA HEIGHTS	STA 1+68.86	17.0' L	5755.97
9	PC	APISHAPA HEIGHTS	STA 2+60.53	12.0' R	5760.74
10	PI	APISHAPA HEIGHTS	STA 3+06.84	32.0' L	5761.63
11	PC	APISHAPA HEIGHTS	STA 3+06.84	17.0' L	5761.34
12	PT	APISHAPA HEIGHTS	STA 3+09.89	14.0' L	5761.37
13	HC RAMP MP	APISHAPA HEIGHTS	STA 3+15.07	14.0' L	5761.50
14	PC	APISHAPA HEIGHTS	STA 3+21.08	14.0' L	5761.59
15	PT	APISHAPA HEIGHTS	STA 3+24.12	17.0' L	5761.68
19	PI	APISHAPA HEIGHTS	STA 1+68.86	32.0' L	5756.25
20	PI	APISHAPA HEIGHTS	STA 3+24.12	32.0' L	5762.02
21	PT	APISHAPA HEIGHTS	STA 2+64.06	15.1' R	5761.37
22	END TYPE B C&G	APISHAPA HEIGHTS	STA 2+63.88	20.2' R	5762.00
23	BEGIN TYPE B C&G	APISHAPA HEIGHTS	STA 3+09.65	20.2' R	5762.00
24	PC	APISHAPA HEIGHTS	STA 3+09.74	14.9' R	5761.90
25	PT	APISHAPA HEIGHTS	STA 3+12.71	12.0' R	5761.90
26	HC RAMP MP	APISHAPA HEIGHTS	STA 3+15.06	12.0' R	5762.01
27	PC	APISHAPA HEIGHTS	STA 3+17.41	12.0' R	5762.10
28	PT	APISHAPA HEIGHTS	STA 3+20.38	14.9' R	5762.50
29	END TYPE B C&G	APISHAPA HEIGHTS	STA 3+20.48	20.3' R	5763.10
30	BEGIN TYPE B C&G	APISHAPA HEIGHTS	STA 3+60.90	20.1' R	5763.10
31	PC	APISHAPA HEIGHTS	STA 3+60.90	15.0' R	5762.95
32	PT	APISHAPA HEIGHTS	STA 3+63.86	12.0' R	5762.94
33	PC	APISHAPA HEIGHTS	STA 3+72.97	12.0' R	5763.21
34	PT	APISHAPA HEIGHTS	STA 3+75.93	14.9' R	5763.60
35	END TYPE B C&G	APISHAPA HEIGHTS	STA 3+76.03	20.2' R	5764.20
59	HC RAMP MP	APISHAPA HEIGHTS	STA 1+23.99	20.3' L	5753.04
60	HC RAMP MP	APISHAPA HEIGHTS	STA 1+20.75	16.7' R	5753.21
61	PC	SEGUNDO GROVE	STA 2+01.40	12.0' R	5754.65
62	PC/ END CATCH CURB	SEGUNDO GROVE	STA 2+04.49	14.0' L	5754.16

POINT TABLE					
No.	DESC.	ALIGNMENT	STATION	OFFSET	FL EL.
63	PT	SEGUNDO GROVE	STA 2+08.11	17.1' L	5754.29
64	PT	SEGUNDO GROVE	STA 2+04.01	15.0' R	5754.77
65	PI	SEGUNDO GROVE	STA 2+04.01	29.0' R	5755.03
66	PI	SEGUNDO GROVE	STA 2+44.56	29.0' R	5755.49
67	PC	SEGUNDO GROVE	STA 2+44.56	15.0' R	5755.23
68	PI	SEGUNDO GROVE	STA 2+08.11	32.0' L	5754.58
69	PT	SEGUNDO GROVE	STA 2+47.17	12.0' R	5755.10
70	PC	SEGUNDO GROVE	STA 3+03.57	12.0' R	5755.67
71	PT	SEGUNDO GROVE	STA 3+08.51	17.0' R	5755.81
72	PI	SEGUNDO GROVE	STA 3+58.87	32.0' L	5756.05
73	PI	SEGUNDO GROVE	STA 3+08.51	30.0' R	5756.05
74	PI	SEGUNDO GROVE	STA 3+62.04	30.0' R	5756.71
75	PC	SEGUNDO GROVE	STA 3+62.04	15.0' R	5756.28
76	PT	SEGUNDO GROVE	STA 3+65.01	12.0' R	5756.28
77	PC	SEGUNDO GROVE	STA 3+58.87	17.0' L	5755.75
78	PT	SEGUNDO GROVE	STA 3+61.91	14.0' L	5755.73
79	PC	SEGUNDO GROVE	STA 3+73.97	14.0' L	5755.85
80	PC	SEGUNDO GROVE	STA 3+73.06	12.0' R	5756.36
81	PT	SEGUNDO GROVE	STA 3+76.02	15.0' R	5756.43
82	PT	SEGUNDO GROVE	STA 3+77.00	17.0' L	5755.93
83	PI	SEGUNDO GROVE	STA 3+77.00	32.0' L	5756.25
84	PI	SEGUNDO GROVE	STA 3+75.97	30.0' R	5756.75
85	PI	SEGUNDO GROVE	STA 4+19.28	30.0' R	5757.17
86	PC	SEGUNDO GROVE	STA 4+19.28	15.0' R	5757.12
87	PT	SEGUNDO GROVE	STA 4+22.25	12.0' R	5756.86
88	PC	SEGUNDO GROVE	STA 4+41.55	12.0' R	5757.05
89	HC RAMP MP	SEGUNDO GROVE	STA 2+28.22	32.0' L	5754.75
90	HC RAMP MP	SEGUNDO GROVE	STA 1+52.86	14.0' L	5753.57
92	HC RAMP MP	SEGUNDO GROVE	STA 3+69.03	12.0' R	5756.32
93	HC RAMP MP	SEGUNDO GROVE	STA 3+69.10	14.0' L	5755.83
187	BEGIN TYPE B C&G	SEGUNDO GROVE	STA 1+47.35	12.0' R	5753.88
188	END T2 C&G (CATCH)/ BEGIN FL TRANS + FULL CROWN	SEGUNDO GROVE	STA 1+19.13	13.0' R	5753.18
189	BEGIN SUPERELEVATED SECTION	SEGUNDO GROVE	STA 1+75.00	12.0' R	5754.40
190	BEGIN TYPE B C&G (END CATCH CURB)	SEGUNDO GROVE	STA 1+34.26	12.0' R	5753.54



NOTES:

1. ALL TYPE B C&G IS IN SPILL CONDITION UNLESS OTHERWISE NOTED

Curve Table				
Curve #	Length	Radius	Delta	Centerline/Flowline
C1	37.00	28.00	75°42'56"	Flowline
C2	39.17	28.00	80°08'56"	Flowline
C3	4.71	3.00	90°00'00"	Flowline
C4	4.91	3.00	93°40'48"	Flowline
C5	4.72	3.00	90°08'58"	Flowline
C6	4.72	3.00	90°08'58"	Flowline
C7	4.65	3.00	88°51'25"	Flowline
C8	4.65	3.00	88°45'05"	Flowline
C9	4.71	3.00	89°52'44"	Flowline
C10	4.65	3.00	88°45'05"	Flowline
C27	4.82	3.00	92°04'17"	Flowline
C28	4.63	3.00	88°30'19"	Flowline
C29	4.63	3.00	88°30'19"	Flowline
C30	7.84	5.00	89°47'18"	Flowline
C31	4.71	3.00	89°52'22"	Flowline
C32	4.72	3.00	90°07'49"	Flowline
C33	4.72	3.00	90°03'49"	Flowline
C34	4.72	3.00	90°07'49"	Flowline

NORTH

0 50
25

LEGEND:
SIGN LOCATION AS NOTED ON PLAN

1. STOP — R-1, SINGLE LANE 30"X30", MULTI LANE 36"X36"
2. RESERVED PARKING — R7-8, 12"x18"
3. EMERGENCY AND AUTHORIZED VEHICLES ONLY — 12"x18"

NOT FOR CONSTRUCTION

PCD FILNE NO.: SF2214

DRAWN BY: CBM	JOB DATE: 9/1/2022	BAR IS ONE INCH ON OFFICIAL DRAWINGS. 0 1" IF NOT ONE INCH ADJUST SCALE ACCORDINGLY.	
APPROVED: KMH	JOB NUMBER: 200541		
CAD DATE: 9/1/2022			
CAD FILE: J:\2020\200541\CAD\Dwgs\C\CD\El_Paso_Co\Roadway			

NO.	DATE	BY	REVISION DESCRIPTION

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COLORADO SPRINGS CO 80919
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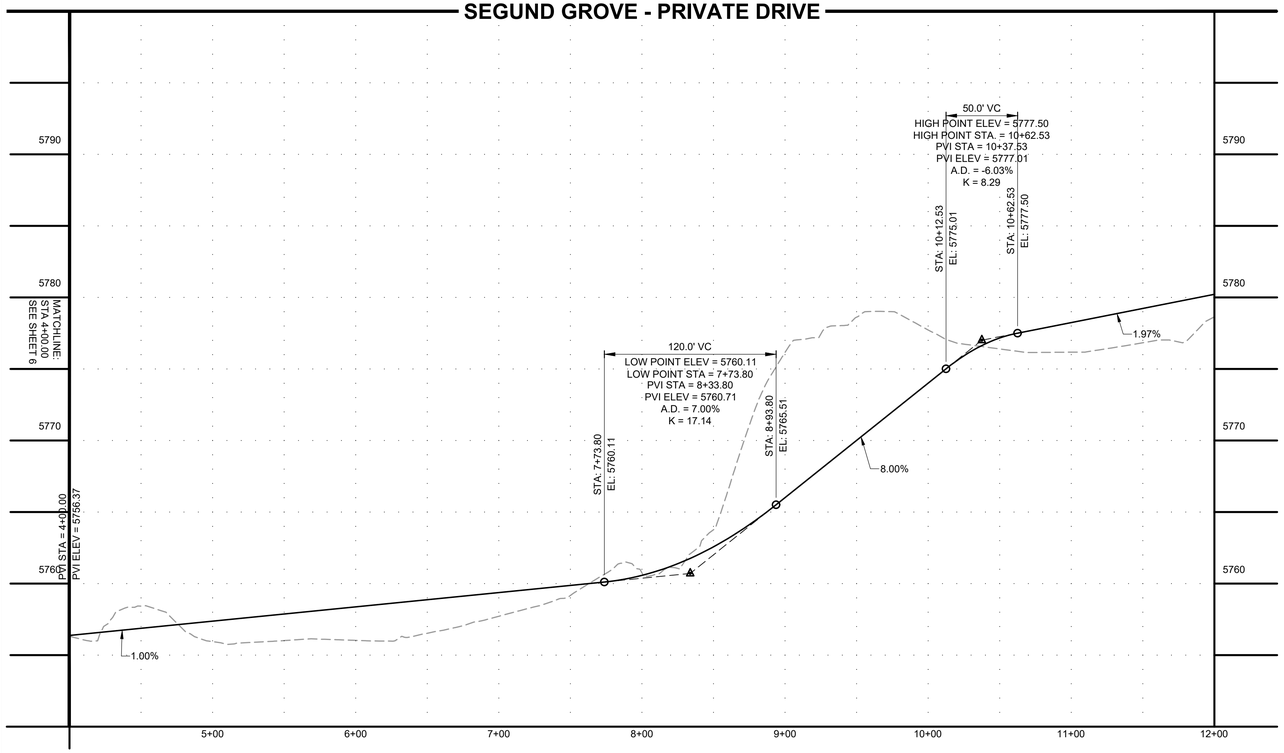
GOODWIN KNIGHT

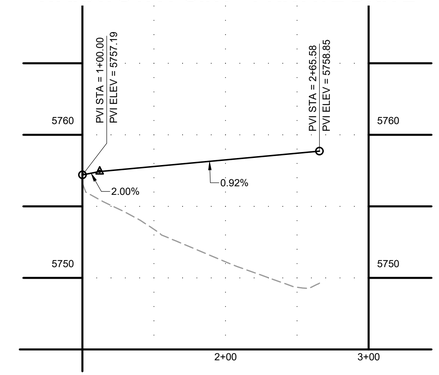
EL PASO COUNTY CONSTRUCTION DOCUMENTS
ROADWAY PLAN & PROFILE

SHEET RD

SEGUND GROVE - PRIVATE DRIVE



WAHATOYA POINT - PRIVATE DRIVE

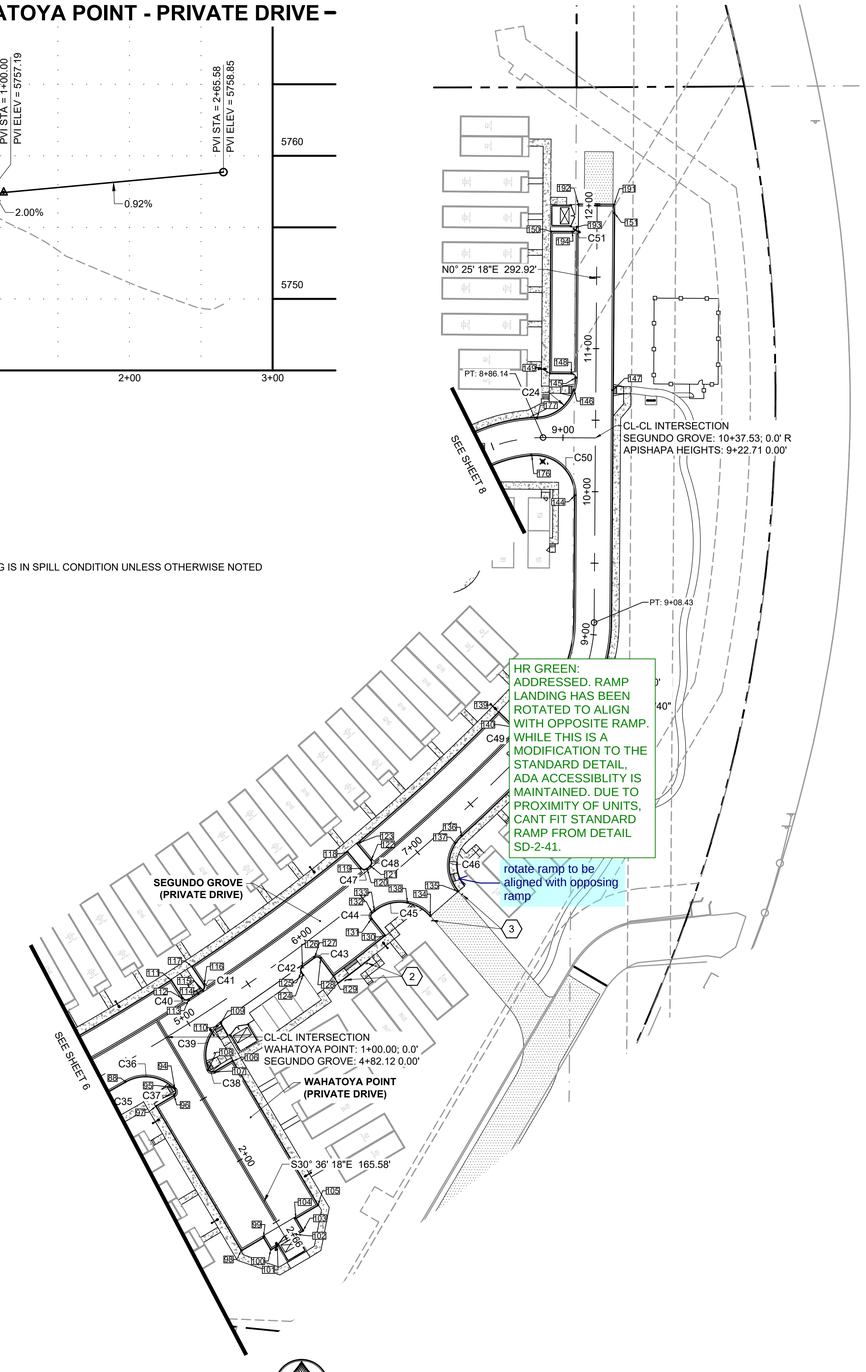


NOTES:

1. ALL TYPE B C&G IS IN SPILL CONDITION UNLESS OTHERWISE NOTED

0 50 HORIZONTAL

0 5 VERTICAL



POINT TABLE					
No.	DESC.	ALIGNMENT	STATION	OFFSET	FL EL.
88	PC	SEGUNDO GROVE	STA 4+41.55	12.0' R	5757.05
94	PCC	SEGUNDO GROVE	STA 4+68.15	33.9' R	5757.93
95	HC RAMP MP	SEGUNDO GROVE	STA 4+67.77	32.3' R	5757.90
96	PT	SEGUNDO GROVE	STA 4+65.26	37.6' R	5758.10
97	PI	SEGUNDO GROVE	STA 4+51.25	37.5' R	5758.37
98	PI	WAHATOYA POINT	STA 2+54.80	31.0' R	5759.52
99	PI	WAHATOYA POINT	STA 2+54.80	13.0' R	5759.15
100	PI	WAHATOYA POINT	STA 2+64.80	13.0' R	5759.35
101	END TYPE B C&G	WAHATOYA POINT	STA 2+64.80	7.8' R	5759.42
102	BEGIN TYPE B C&G	WAHATOYA POINT	STA 2+64.80	7.8' L	5759.42
103	PI	WAHATOYA POINT	STA 2+64.80	13.0' L	5759.35
104	PI	WAHATOYA POINT	STA 2+54.80	13.0' L	5759.15
105	PI	WAHATOYA POINT	STA 2+54.80	31.0' L	5759.51
106	PI	SEGUNDO GROVE	STA 5+11.52	38.7' R	5758.36
107	PC	SEGUNDO GROVE	STA 4+97.23	38.2' R	5758.10
108	PCC	SEGUNDO GROVE	STA 4+94.45	34.7' R	5757.96
109	END TYPE B C&G	SEGUNDO GROVE	STA 5+19.07	12.1' R	5758.32
110	HC RAMP MP	SEGUNDO GROVE	STA 5+15.83	12.5' R	5757.79
111	PI	SEGUNDO GROVE	STA 5+06.10	32.0' L	5757.52
112	PC	SEGUNDO GROVE	STA 5+06.10	17.0' L	5757.22
113	PT	SEGUNDO GROVE	STA 5+09.13	14.0' L	5757.22
114	HC RAMP MP	SEGUNDO GROVE	STA 5+17.06	14.0' L	5757.29
115	PC	SEGUNDO GROVE	STA 5+21.08	14.0' L	5757.33
116	PT	SEGUNDO GROVE	STA 5+24.12	17.0' L	5757.40
117	PI	SEGUNDO GROVE	STA 5+24.12	32.0' L	5757.72
118	PI	SEGUNDO GROVE	STA 6+62.37	32.0' L	5759.09
119	PC	SEGUNDO GROVE	STA 6+62.37	17.0' L	5758.78
120	PT	SEGUNDO GROVE	STA 6+65.41	14.0' L	5758.77
121	PC	SEGUNDO GROVE	STA 6+68.55	14.0' L	5758.80
122	PT	SEGUNDO GROVE	STA 6+71.59	17.0' L	5758.87
123	PI	SEGUNDO GROVE	STA 6+71.59	32.0' L	5759.20
124	BEGIN TYPE B C&G	SEGUNDO GROVE	STA 5+84.69	17.2' R	5758.57

POINT TABLE					
No.	DESC.	ALIGNMENT	STATION	OFFSET	FL EL.
125	PC	SEGUNDO GROVE	STA 5+84.73	14.9' R	5758.52
126	PT	SEGUNDO GROVE	STA 5+87.70	12.0' R	5758.49
127	PC	SEGUNDO GROVE	STA 5+98.26	12.0' R	5758.59
128	PT	SEGUNDO GROVE	STA 6+01.23	15.0' R	5758.68
129	PI	SEGUNDO GROVE	STA 6+01.23	30.0' R	5758.99
130	PI	SEGUNDO GROVE	STA 6+45.82	30.0' R	5759.53
131	PC	SEGUNDO GROVE	STA 6+45.82	15.0' R	5759.25
132	PT	SEGUNDO GROVE	STA 6+48.79	12.0' R	5759.12
133	PCR	SEGUNDO GROVE	STA 6+51.00	12.0' R	5759.14
134	END TYPE B C&G	SEGUNDO GROVE	STA 6+78.19	39.6' R	5758.87
135	BEGIN TYPE B C&G	SEGUNDO GROVE	STA 7+03.45	39.3' R	5759.39
136	PCR	SEGUNDO GROVE	STA 7+30.63	12.0' R	5759.94
137	HC RAMP MP	SEGUNDO GROVE	STA 7+23.96	12.8' R	5759.82
138	HC RAMP MP	SEGUNDO GROVE	STA 6+72.17	22.3' R	5759.38
139	PI	SEGUNDO GROVE	STA 8+09.90	32.0' L	5760.72
140	PC	SEGUNDO GROVE	STA 8+09.90	17.0' L	5760.74
141	PT/ BEGIN CATCH CURB	SEGUNDO GROVE	STA 8+12.94	14.0' L	5760.61
142	HC RAMP MP	SEGUNDO GROVE	STA 8+27.83	14.0' L	5761.16
143	HC RAMP MP	SEGUNDO GROVE	STA 8+27.77	12.0' R	5761.74
144	PCR/ END CATCH CURB	SEGUNDO GROVE	STA 9+97.28	14.0' L	5773.45
145	PCR	SEGUNDO GROVE	STA 10+79.52	14.0' L	5777.52
146	HC RAMP MP	SEGUNDO GROVE	STA 10+71.05	15.3' L	5777.35
147	HC RAMP MP	SEGUNDO GROVE	STA 10+71.05	12.0' R	5777.94
148	PT	SEGUNDO GROVE	STA 10+82.51	17.0' L	5777.64
149	PI	SEGUNDO GROVE	STA 10+82.51	32.0' L	5777.95
150	PI	SEGUNDO GROVE	STA 11+81.51	32.0' L	5779.97
151	END TYPE B C&G (END CATCH CURB)	SEGUNDO GROVE	STA 11+94.86	12.0' R	5781.95
191	BEGIN TYPE E C&G	SEGUNDO GROVE	STA 12+00.53	11.7' R	5782.63
192	END TYPE E C&G	SEGUNDO GROVE	STA 12+00.53	13.0' L	5780.50
193	PT/END TYPE B C&G	SEGUNDO GROVE	STA 11+84.86	14.0' L	5779.80
194	PC	SEGUNDO GROVE	STA 11+81.51	17.0' L	5779.75

Curve Table			
Curve #	Length	Radius	Delta
C36	37.60	28.00	76°56'16"
C37	5.37	3.00	102°38'48"
C38	5.17	3.00	98°45'33"
C39	36.19	28.00	74°03'36"
C40	4.72	3.00	90°07'49"
C41	4.72	3.00	90°07'49"
C42	4.66	3.00	88°54'28"
C43	4.71	3.00	89°52'22"
C44	4.71	3.00	89°52'22"
C45	43.27	28.00	88°32'23"
C46	43.03	28.00	88°02'44"
C47	4.72	3.00	90°07'49"
C48	4.72	3.00	90°07'49"
C49	4.72	3.00	90°07'49"
C50	46.52	28.00	95°11'48"
C51	5.06	3.03	95°45'36"

LEGEND:

SIGN LOCATION AS NOTED ON PLAN

1. STOP — R-1 — SINGLE LANE 30"X30" MULTI LANE 36"X36"
2. RESERVED PARKING — R7-8 — 12"x18"
3. EMERGENCY AND AUTHORIZED VEHICLES ONLY — 12"x18"

NOT FOR CONSTRUCTION

PCD FILNE NO.: SF2214

DRAWN BY: CBM JOB DATE: 9/1/2022
APPROVED: KMH JOB NUMBER: 200541
CAD DATE: 9/1/2022
CAD FILE: J:\2020\200541\CAD\Dwgs\C\CD\EI _Paso_Co\Roadway

BAR IS ONE INCH ON OFFICIAL DRAWINGS. 0 1" IF NOT ONE INCH, ADJUST SCALE ACCORDINGLY.

NO.	DATE	BY	REVISION DESCRIPTION

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COLORADO SPRINGS CO 80919
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EL PASO COUNTY CONSTRUCTION DOCUMENTS
ROADWAY PLAN & PROFILE

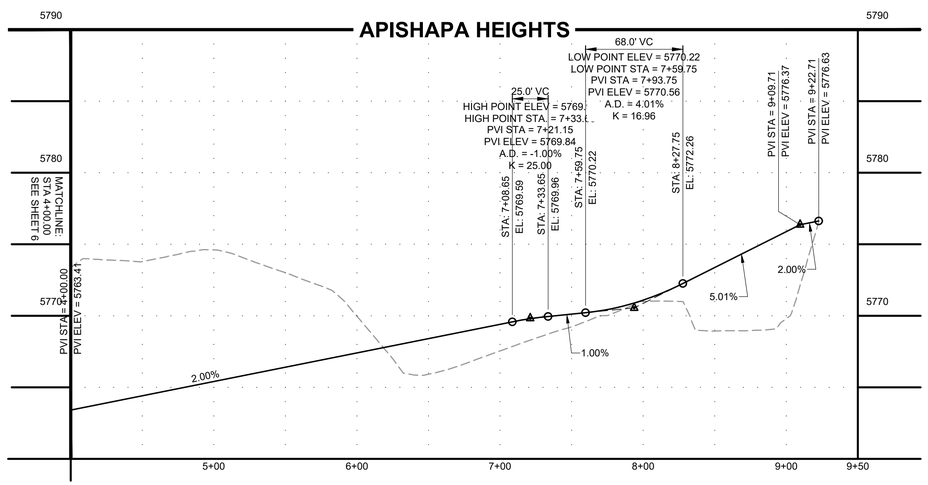
SHEET RD 7

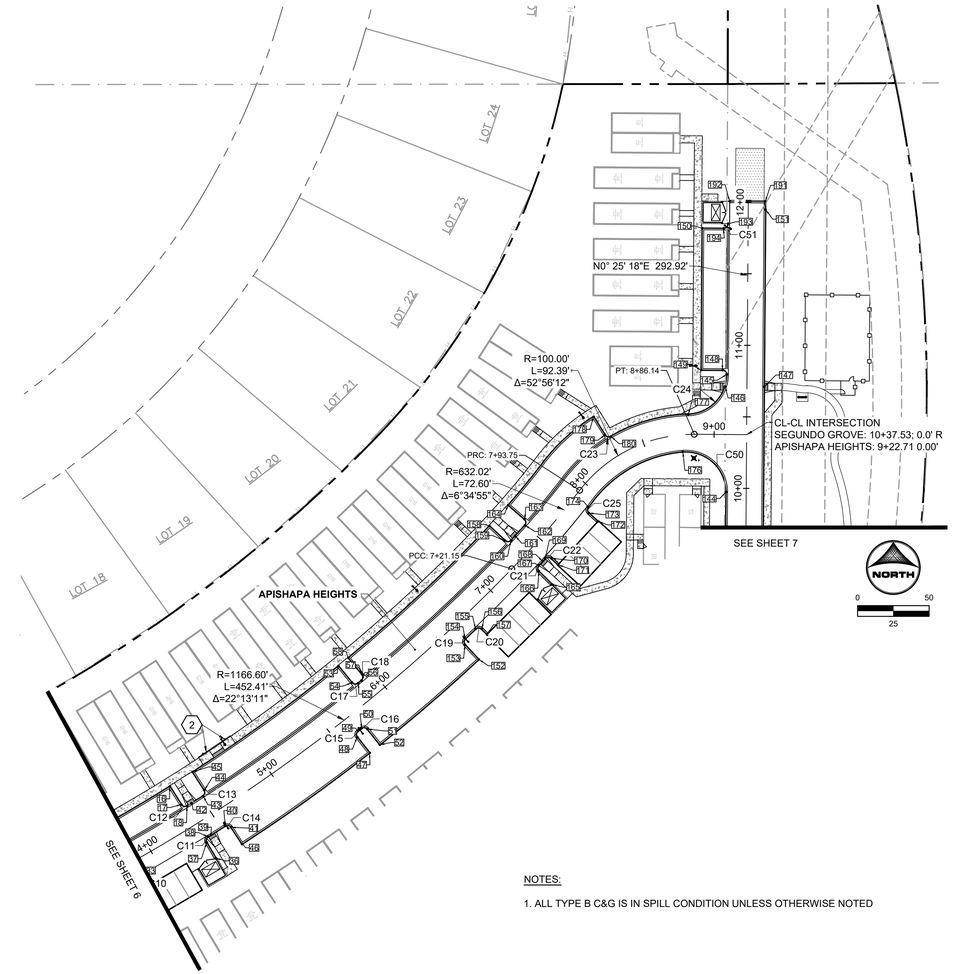
POINT TABLE					
No.	DESC.	ALIGNMENT	STATION	OFFSET	FL EL.
16	PI	APISHAPA HEIGHTS	STA 4+35.17	32.0' L	5764.19
17	PC	APISHAPA HEIGHTS	STA 4+35.22	17.0' L	5763.90
18	PT	APISHAPA HEIGHTS	STA 4+38.27	14.0' L	5763.93
36	BEGIN TYPE B C&G	APISHAPA HEIGHTS	STA 4+35.92	27.6' R	5764.62
37	PC	APISHAPA HEIGHTS	STA 4+36.32	14.9' R	5764.42
38	PT	APISHAPA HEIGHTS	STA 4+39.28	12.0' R	5764.43
39	HC RAMP MP	APISHAPA HEIGHTS	STA 4+41.83	12.0' R	5764.52
40	PC	APISHAPA HEIGHTS	STA 4+53.20	12.0' R	5764.72
41	PT	APISHAPA HEIGHTS	STA 4+56.16	15.0' R	5764.84
42	HC RAMP MP	APISHAPA HEIGHTS	STA 4+41.81	14.0' L	5764.01
43	PC	APISHAPA HEIGHTS	STA 4+51.48	14.0' L	5764.19
44	PT	APISHAPA HEIGHTS	STA 4+54.53	17.0' L	5764.29
45	PI	APISHAPA HEIGHTS	STA 4+54.53	32.0' L	5764.62
46	PI	APISHAPA HEIGHTS	STA 4+56.16	29.0' R	5765.15
47	PI	APISHAPA HEIGHTS	STA 5+63.15	29.0' R	5767.26
48	PC	APISHAPA HEIGHTS	STA 5+63.15	15.0' R	5766.98
49	PT	APISHAPA HEIGHTS	STA 5+66.11	12.0' R	5766.97
50	PC	APISHAPA HEIGHTS	STA 5+69.10	12.0' R	5767.03

POINT TABLE					
No.	DESC.	ALIGNMENT	STATION	OFFSET	FL EL.
51	PT	APISHAPA HEIGHTS	STA 5+72.07	15.0' R	5767.15
52	PI	APISHAPA HEIGHTS	STA 5+72.07	29.0' R	5767.47
53	PI	APISHAPA HEIGHTS	STA 5+84.08	32.0' L	5767.17
54	PC	APISHAPA HEIGHTS	STA 5+84.08	17.0' L	5766.87
55	PT	APISHAPA HEIGHTS	STA 5+87.12	14.0' L	5766.89
56	PC	APISHAPA HEIGHTS	STA 5+90.29	14.0' L	5766.96
57	PT	APISHAPA HEIGHTS	STA 5+93.33	17.0' L	5767.06
58	PI	APISHAPA HEIGHTS	STA 5+93.33	32.0' L	5767.40
152	PI	APISHAPA HEIGHTS	STA 6+61.09	29.0' R	5769.21
153	PC	APISHAPA HEIGHTS	STA 6+61.09	15.0' R	5768.93
154	PT	APISHAPA HEIGHTS	STA 6+64.05	12.0' R	5768.93
155	PC	APISHAPA HEIGHTS	STA 6+73.94	12.0' R	5769.22
156	PT	APISHAPA HEIGHTS	STA 6+76.90	14.9' R	5769.61
157	END TYPE B C&G	APISHAPA HEIGHTS	STA 6+76.99	20.2' R	5770.19
158	PI	APISHAPA HEIGHTS	STA 7+32.41	32.0' L	5770.04
159	PC	APISHAPA HEIGHTS	STA 7+32.41	17.0' L	5769.87
160	PT	APISHAPA HEIGHTS	STA 7+35.49	14.0' L	5769.82
161	HC RAMP MP	APISHAPA HEIGHTS	STA 7+39.69	14.0' L	5769.81

POINT TABLE					
No.	DESC.	ALIGNMENT	STATION	OFFSET	FL EL.
162	PC	APISHAPA HEIGHTS	STA 7+50.07	14.0' L	5769.95
163	PT	APISHAPA HEIGHTS	STA 7+53.15	17.0' L	5770.02
164	PI	APISHAPA HEIGHTS	STA 7+53.15	32.0' L	5770.27
165	BEGIN TYPE B C&G	APISHAPA HEIGHTS	STA 7+32.37	27.8' R	5770.85
166	PC	APISHAPA HEIGHTS	STA 7+32.86	14.9' R	5770.78
167	PT	APISHAPA HEIGHTS	STA 7+35.79	12.0' R	5770.42
168	HC RAMP MP	APISHAPA HEIGHTS	STA 7+39.67	12.0' R	5770.35
169	PC	APISHAPA HEIGHTS	STA 7+42.10	12.0' R	5770.30
170	PT	APISHAPA HEIGHTS	STA 7+45.03	15.0' R	5770.61
171	END TYPE B C&G	APISHAPA HEIGHTS	STA 7+44.96	21.6' R	5771.12
172	BEGIN TYPE B C&G	APISHAPA HEIGHTS	STA 7+84.63	23.4' R	5771.12
173	PC	APISHAPA HEIGHTS	STA 7+85.27	14.8' R	5771.00
174	PT	APISHAPA HEIGHTS	STA 7+88.19	12.0' R	5771.01
176	PCR	APISHAPA HEIGHTS	STA 8+77.07	12.0' R	5775.00
177	PCR	APISHAPA HEIGHTS	STA 8+82.31	14.0' L	5774.66
178	PI	APISHAPA HEIGHTS	STA 8+29.95	32.0' L	5772.43
179	PC	APISHAPA HEIGHTS	STA 8+29.95	17.0' L	5772.25
180	PT	APISHAPA HEIGHTS	STA 8+32.51	14.0' L	5772.20

Curve Table			
Curve #	Length	Radius	Delta
C11	4.61	3.00	87°59'29"
C12	4.71	3.00	89°57'01"
C13	4.72	3.00	90°08'58"
C14	4.70	3.00	89°51'16"
C15	4.70	3.00	89°51'16"
C16	4.70	3.00	89°51'16"
C17	4.72	3.00	90°08'58"
C18	4.72	3.00	90°08'58"
C19	4.70	3.00	89°51'16"
C20	4.65	3.00	88°51'27"
C21	4.58	3.00	87°29'50"
C22	4.74	3.00	90°26'34"
C23	4.64	3.00	88°31'51"
C24	43.01	28.00	88°00'41"
C25	4.47	3.00	85°22'45"
C50	46.52	28.00	95°11'48"





NOTES:

1. ALL TYPE B C&G IS IN SPILL CONDITION UNLESS OTHERWISE NOTED

LEGEND:

SIGN LOCATION AS NOTED ON PLAN

1 STOP — R-1, SINGLE LANE 30"X30", MULTI LANE 36"X36"

2 RESERVED PARKING — R7-8, 12"x18"

3 EMERGENCY AND AUTHORIZED VEHICLES ONLY — 12"x18"

NOT FOR CONSTRUCTION

PCD FILNE NO.: SF2214

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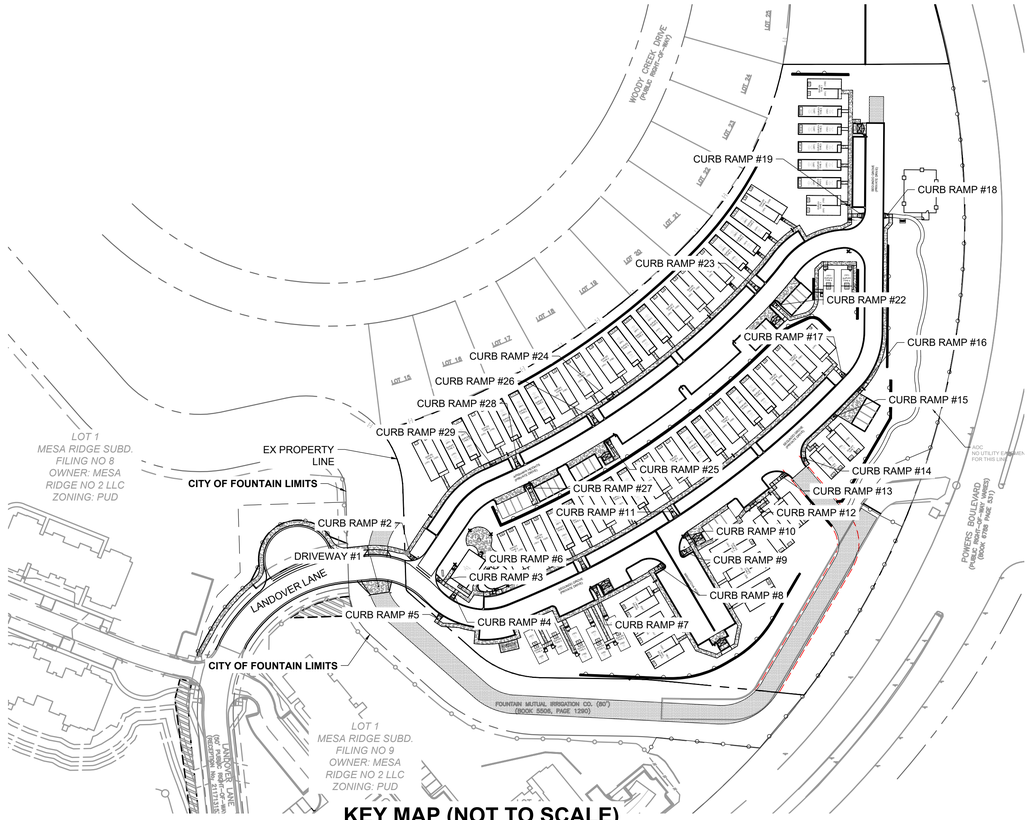
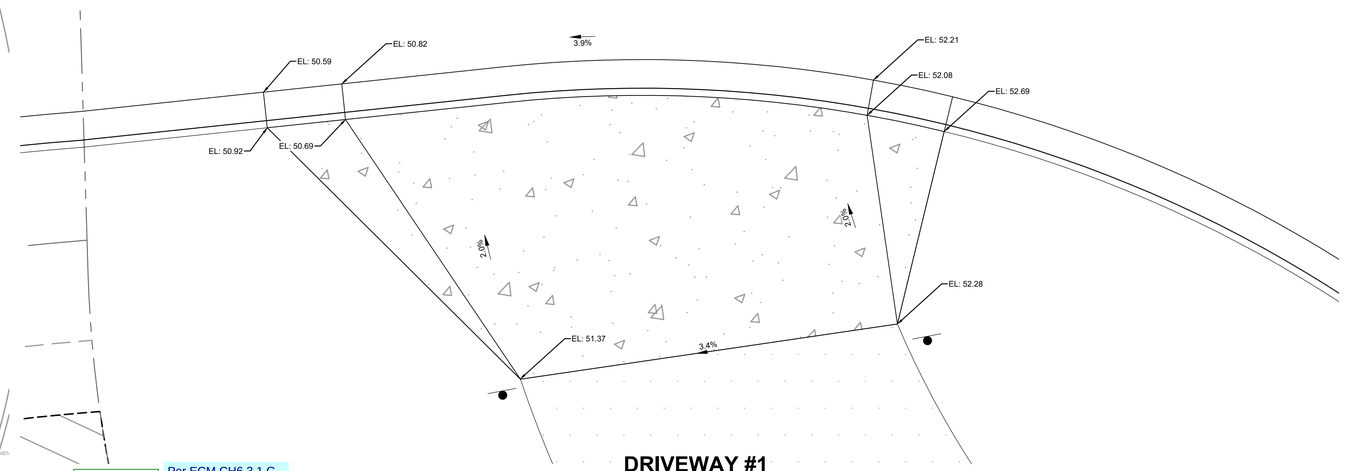
ROADWAY PLAN & PROFILE

SHEET RD

8



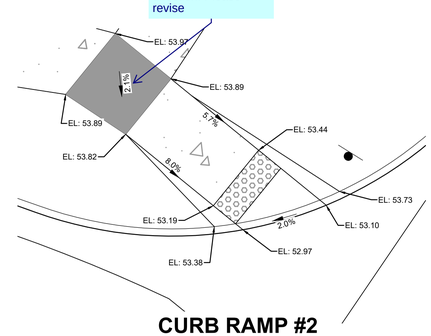
KEY MAP (NOT TO SCALE)



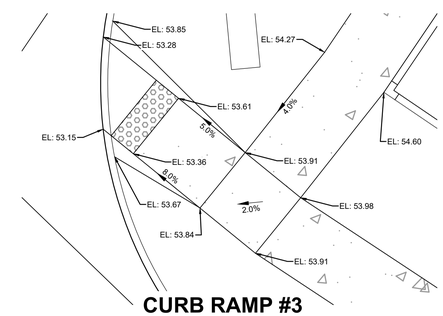
DRIVEWAY #1

HR GREEN: ADDRESSED

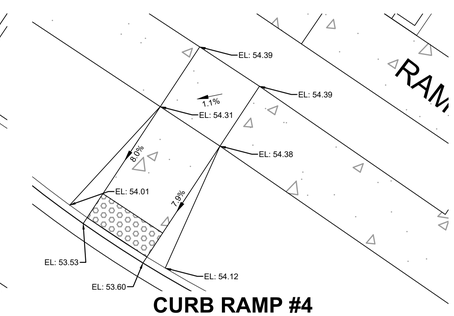
Per ECM CH6.3.1.G, landing shall have a max 2% in any direction. Please revise



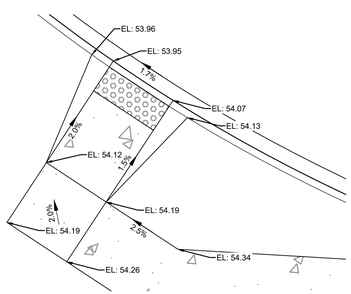
CURB RAMP #2



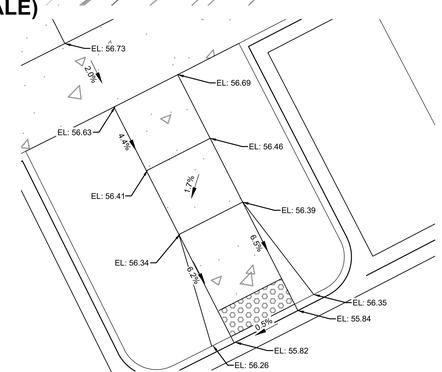
CURB RAMP #3



CURB RAMP #4



CURB RAMP #5



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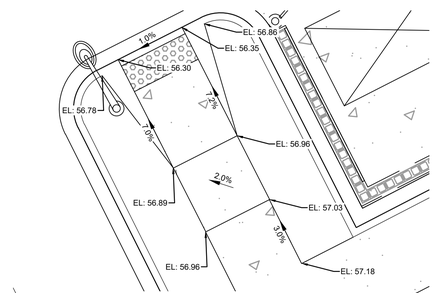

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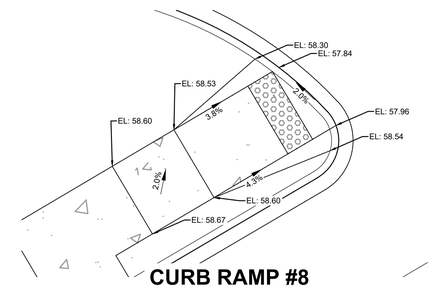

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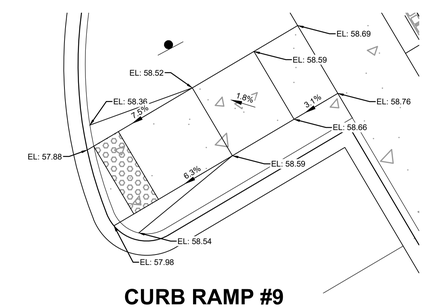

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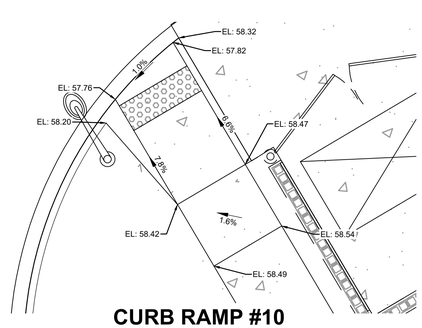

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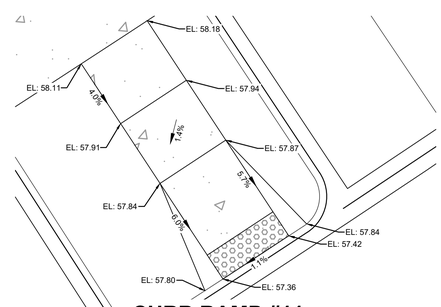

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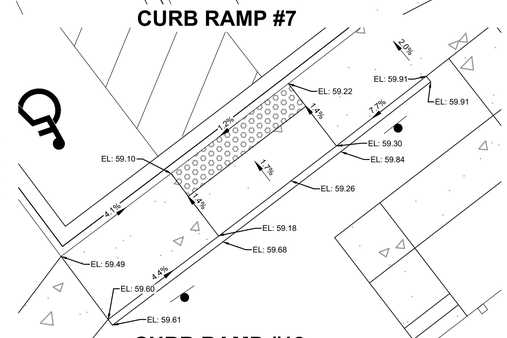

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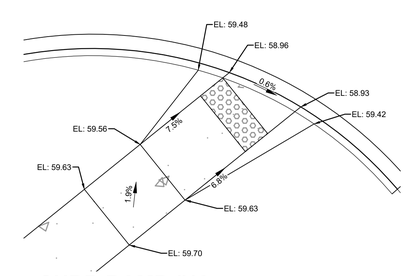

CURB RAMP #13

NORTH

0 5

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APPROVED: KMH	JOB NUMBER: 200541		
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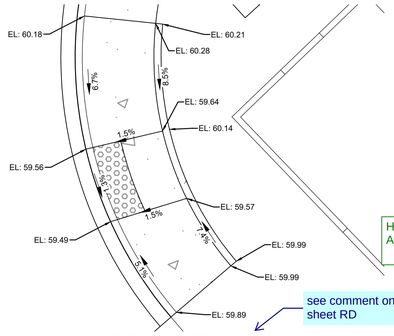
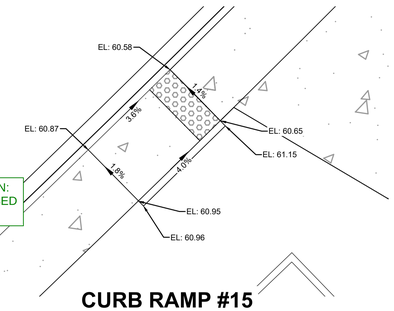


see comment on sheet RD

CURB RAMP #14



HR GREEN: ADDRESSED

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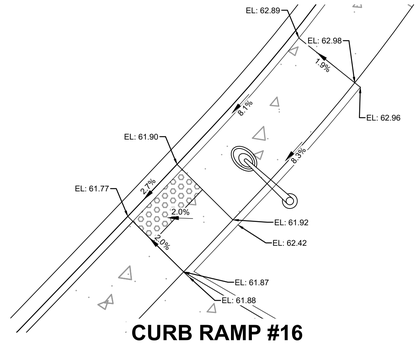

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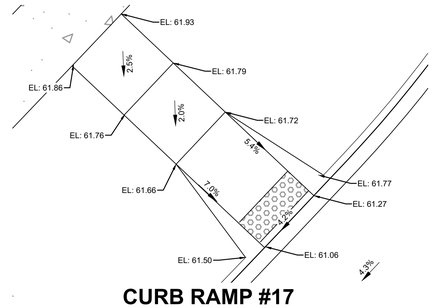

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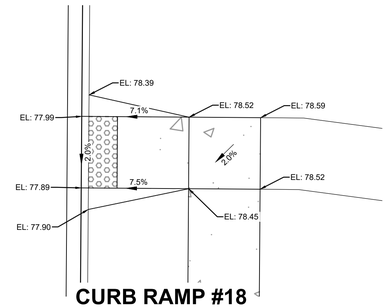

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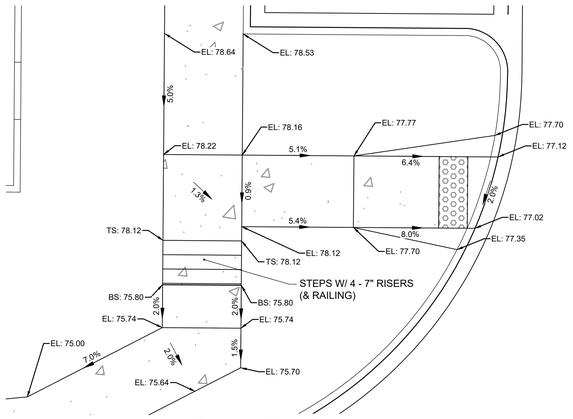
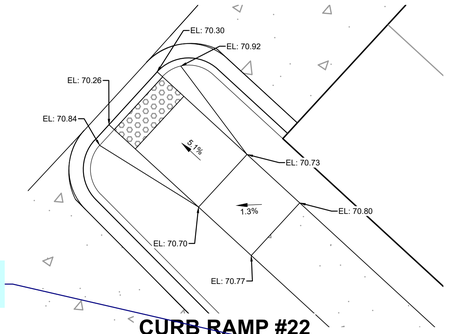


CURB RAMP #19

CURB RAMP #20
REMOVED

CURB RAMP #21
REMOVED



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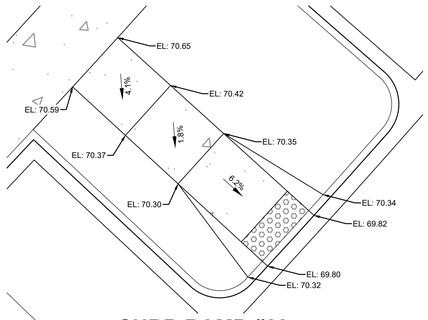

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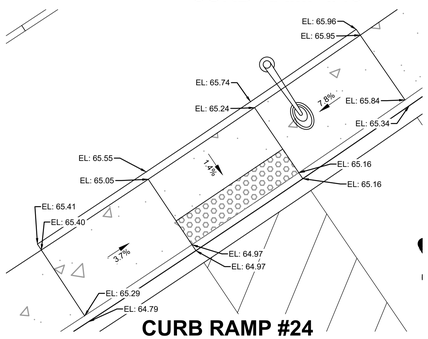
HR GREEN: ADDRESSED

2% max cross slope does not appear to be met



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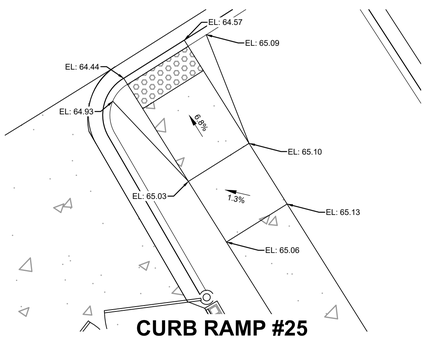

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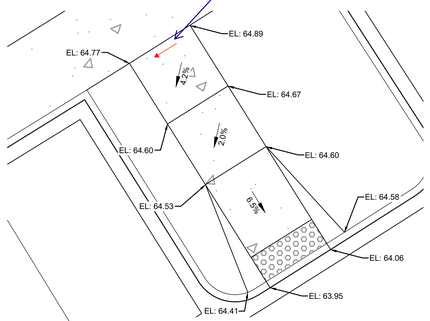

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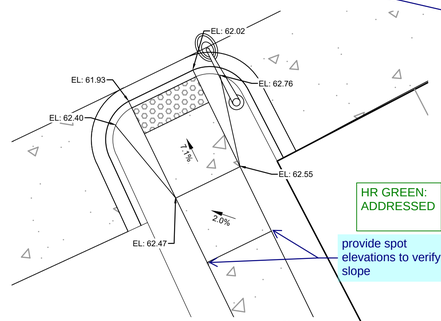
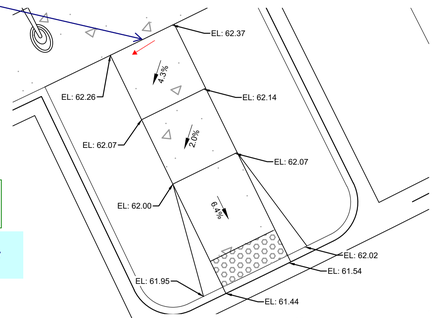


HR GREEN: ADDRESSED

provide spot elevations to verify slope

CURB RAMP #27



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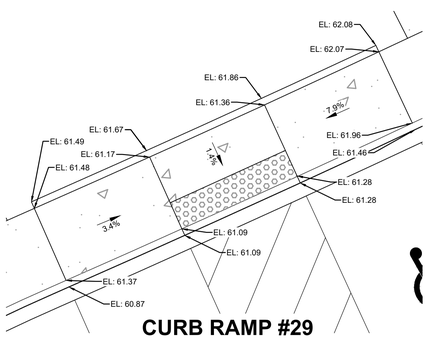

CURB RAMP #29

NORTH

0 5

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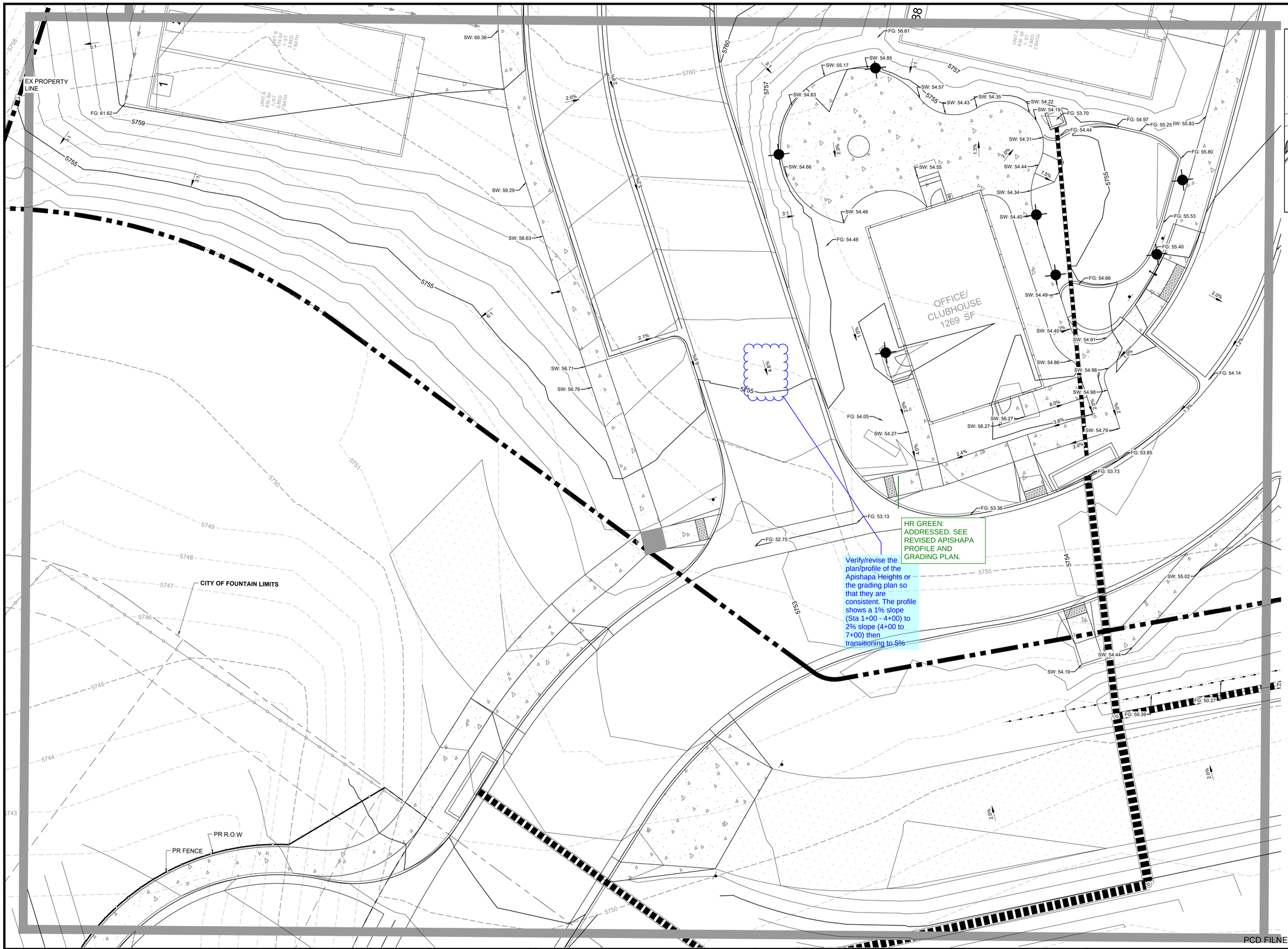

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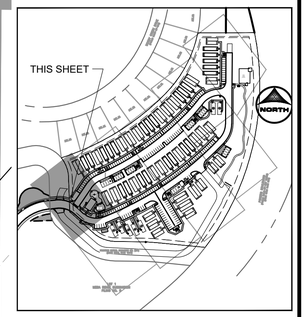

GRADING PLAN LEGEND

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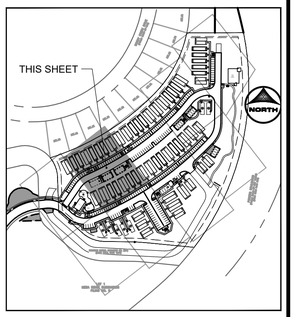
11

HR GREEN Xrefs: xc-row; xc-util; xv-dsgn; xv-dsgn-apts; xv-row; xv-row-apts; xv-util-apts; xc-dsgn; xv-util; Fin_street_approval_block; xc-dsgn-fin; KEY-MAP; grading_plan_legend; xgt-1-arch @10/-CDs_EPC

KEY MAP



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NORTH
0 5 10

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CAD FILE: J:\2020\200541\CAD\Dwgs\C\CD\EI _Paso_Co\Grading			

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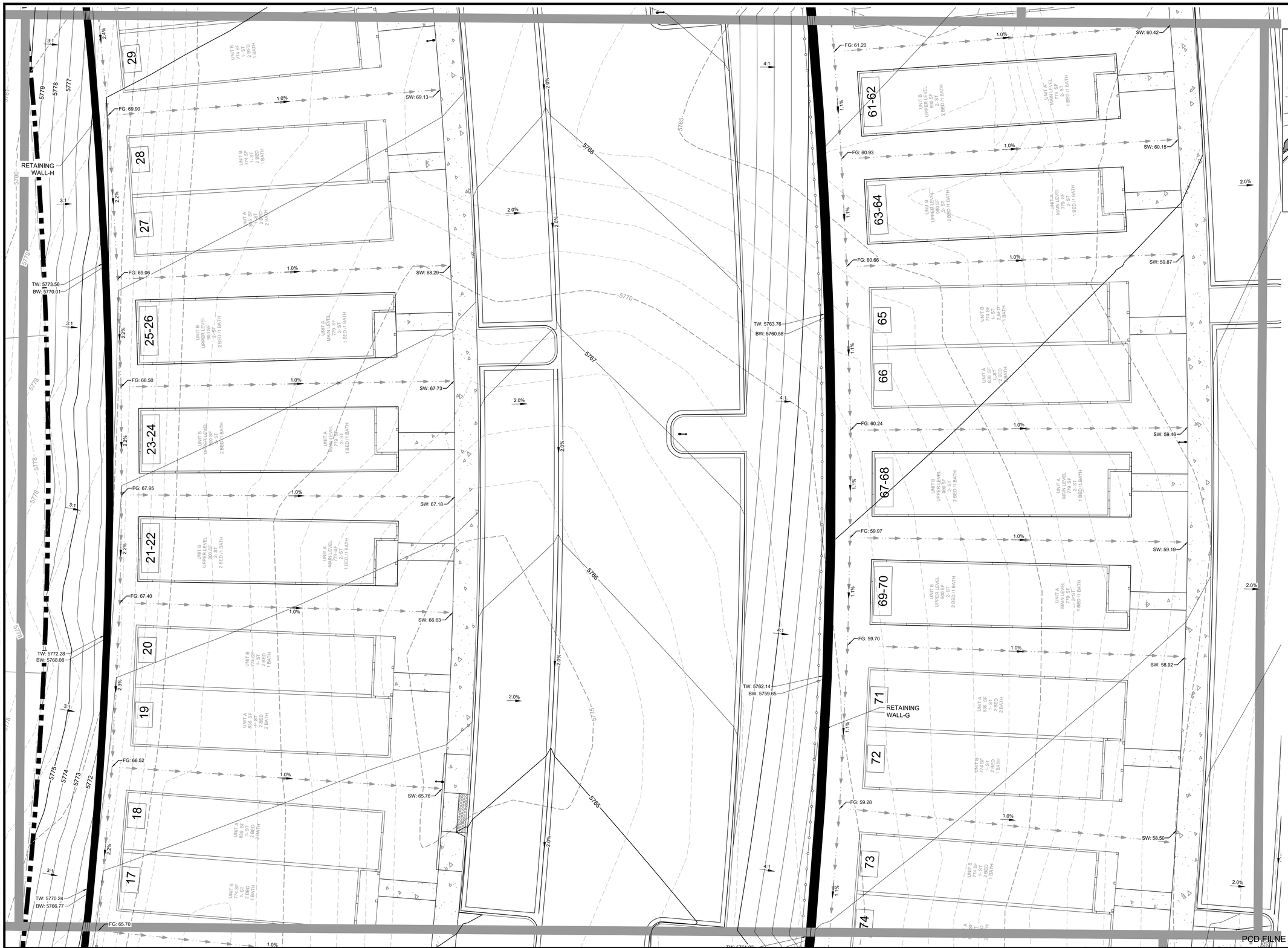

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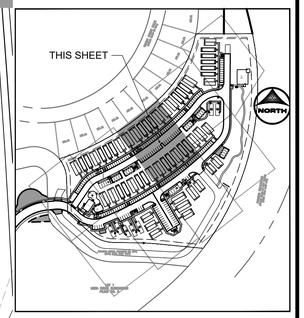

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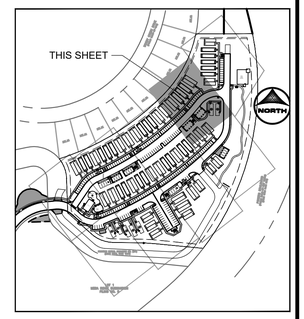
KEY MAP



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DRAWN BY:	CBM	JOB DATE:	8/31/2022
APPROVED:	KMH	JOB NUMBER:	200541
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HR GREEN Xrefs: xc-row; xc-util; xv-dsgn; xv-dsgn-apts; xv-row; xv-row-apts; xv-util-apts; xc-dsgn; xv-util; Ftn_street_approval_block; xc-dsgn-ftn; KEY-MAP; grading_plan_legend; xgt-1-arch dh01-CDs_EPC

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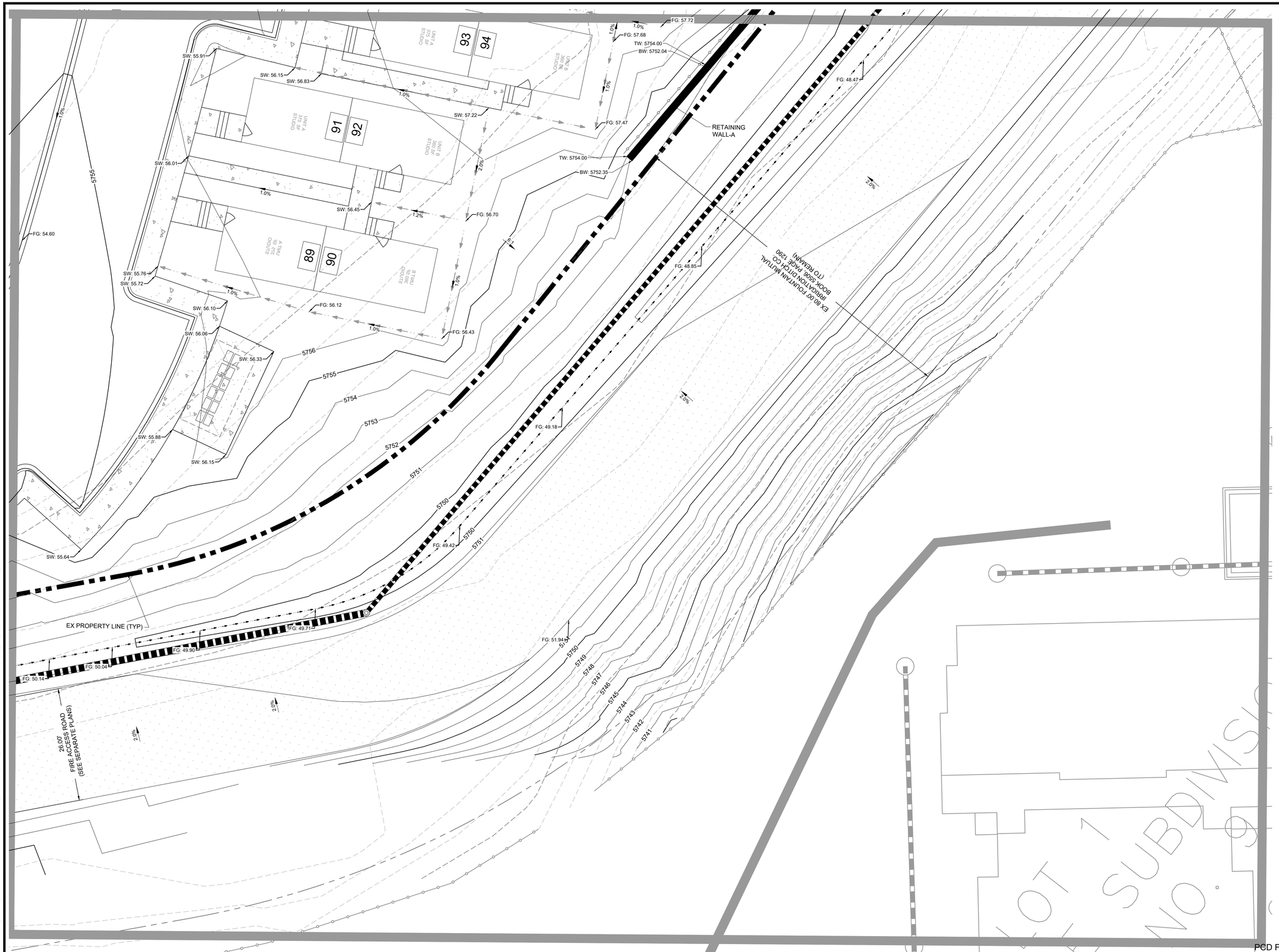

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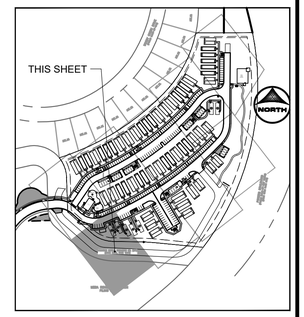

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HR GREEN Xrefs: xc-cow; xc-util; xv-dsgn; xv-dsgn-apts; xv-row; xv-row-apts; xv-util-apts; xc-dsgn; xv-util; Fin_street_approval_block; xc-dsgn-ftn; KEY-MAP; grading_plan_legend; xgt-1-arch dh01-CDs_EPC

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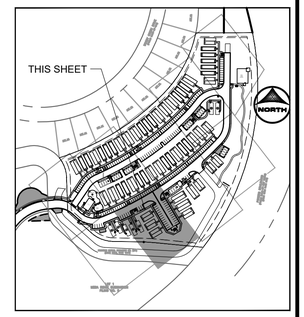
KEY MAP



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PCD FILNE NO.: SF2214

HR GREEN X-refs: xc-row; xc-util; xv-dsgn; xv-dsgn-apts; xv-row; xv-row-apts; xv-util-apts; xc-dsgn; xv-util; Fin_street_approval_block; xc-dsgn-fin; KEY-MAP; grading_plan_legend; xgt-1-arch dh01-CDs_EPC

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HRGreen
HR GREEN - COLORADO SPRINGS
7222 COMMERCE CENTER DR SUITE 220
COLORADO SPRINGS CO 80919
PHONE: 719.300.4140 TOLL FREE: 800.728.7805
FAX: 844.273.1057 | HRGreen.com

THE COTTAGES AT MESA RIDGE
GOODWIN KNIGHT
EL PASO COUNTY, COLORADO

GOODWIN KNIGHT

EL PASO COUNTY CONSTRUCTION DOCUMENTS
DETAILED GRADING

SHEET GR

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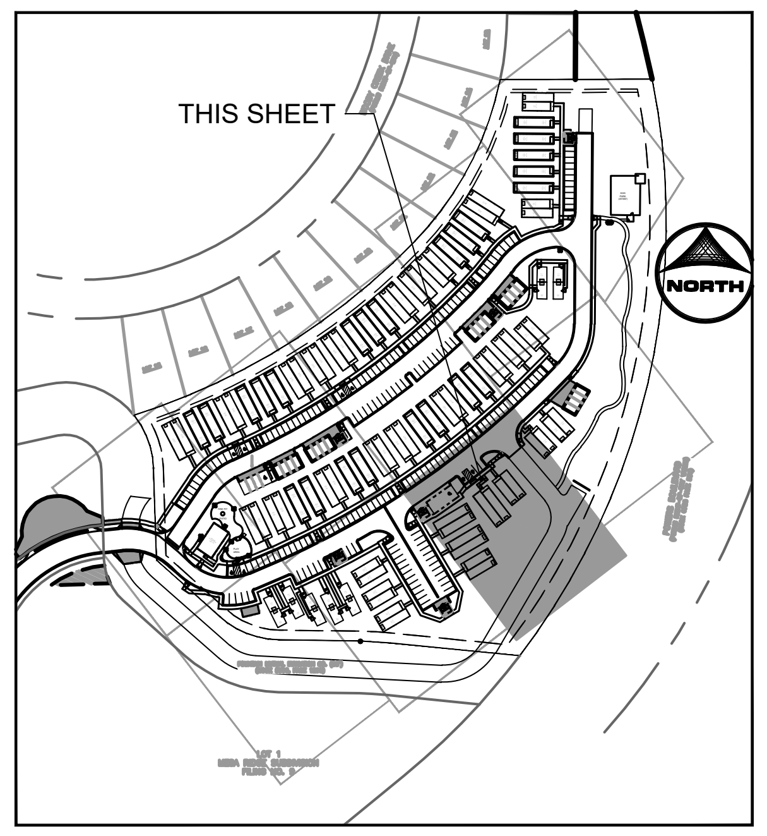
KEY MAP



GRADING PLAN LEGEND

HP = HIGH POINT ELEV.
LP = LOW POINT ELEV.
TOF = TOP OF FOUNDATION ELEVATION
FF = FINISH FLOOR ELEVATION
BW = FINISHED GRADE AT BOTTOM OF WALL
TW = FINISHED GRADE AT TOP OF WALL
TS = TOP OF STAIRS ELEV.
BS = BOTTOM OF STAIRS ELEV.
SW = SIDEWALK ELEVATION
FL = FLOWLINE ELEVATION

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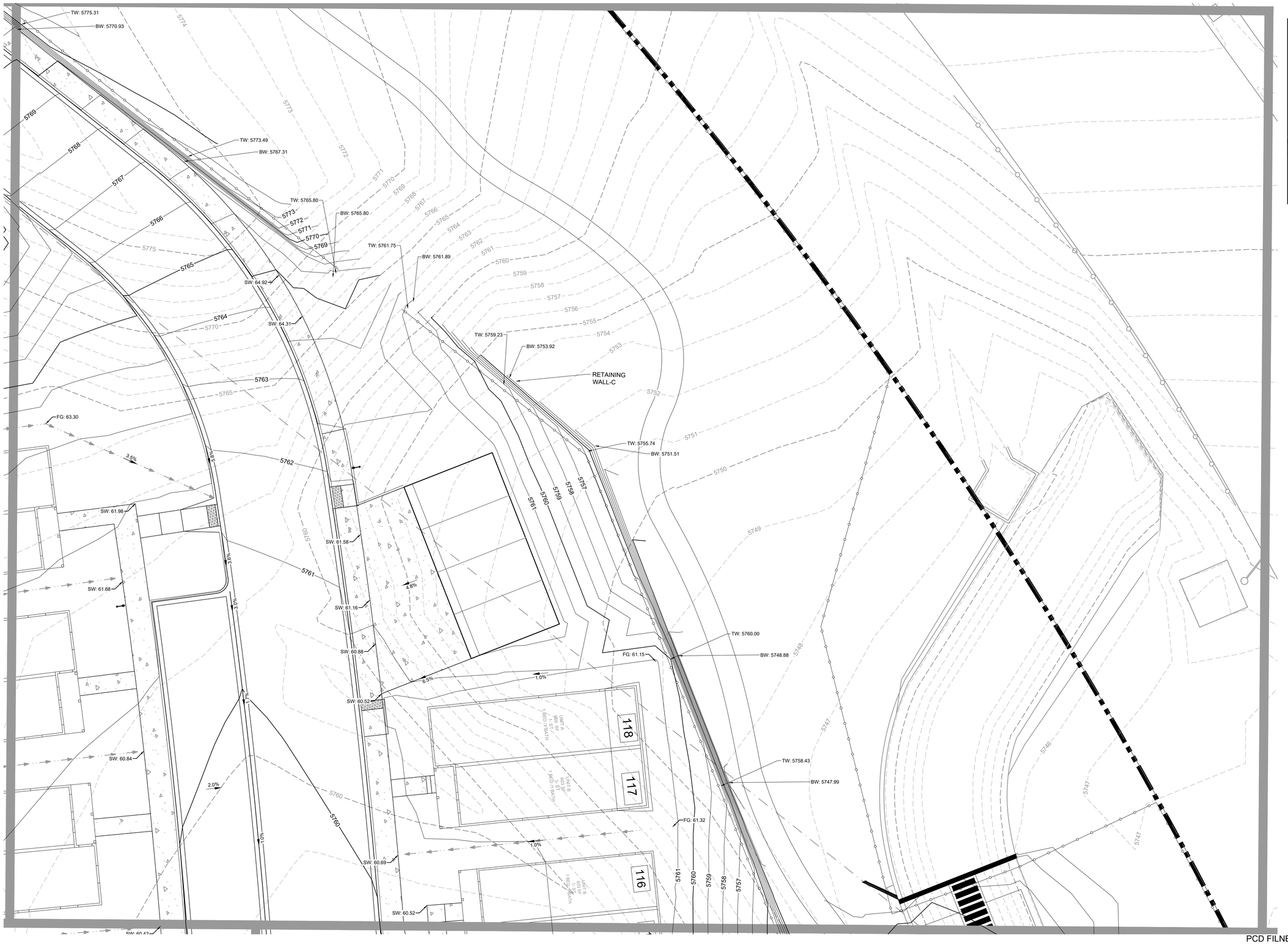

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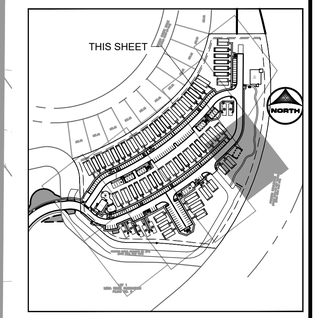

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FSD SANITARY SEWER CONSTRUCTION NOTES:

1. ALL MATERIALS AND WORKMANSHIP SHALL BE IN CONFORMANCE WITH FOUNTAIN SANITATION DISTRICT DESIGN CRITERIA AND CONSTRUCTION SPECIFICATIONS.
2. CONTRACTOR SHALL FIELD VERIFY LOCATION AND ELEVATION OF EXISTING PIPE INVERTS PRIOR TO INSTALLATION OF NEW SANITARY SEWER SYSTEM.
3. THE CONTRACTOR ASSUMES RESPONSIBILITY FOR THE PROTECTION OF ALL UTILITIES DURING THE WORK. PRIOR TO ANY EXCAVATION, CONTACT THE UTILITY NOTIFICATION CENTER OF COLORADO AT 811 AT LEAST TWO WORKING DAYS PRIOR TO DIGGING.
4. ALL PROPOSED SANITARY SEWER PIPELINES WITHIN THIS PROJECT SHALL BE AIR TESTED AND VIDEO INSPECTED PER THE FOUNTAIN SANITATION DISTRICT (FSD) STANDARD SPECIFICATIONS,
5. ALL AS-CONSTRUCTED RECORDS AND OTHER REQUIREMENTS OF THE SUBDIVISION PUBLIC IMPROVEMENTS AGREEMENT SHALL BE COMPLETED PRIOR TO CONSIDERATION OF ACCEPTANCE OF THE SYSTEM BY THE DISTRICT,
6. DURING THE CONSTRUCTION OF THE SANITARY SEWER SYSTEM THE CONTRACTOR SHALL HAVE IN HIS/HER POSSESSION AT LEAST ONE "APPROVED FOR CONSTRUCTION" SET OF UPDATED PLANS AT ALL TIMES. APPROVED FIELD MODIFICATIONS TO PLAN SETS SHALL BE CLEARLY IDENTIFIED IN RED INK ON THE PLANS BY THE CONTRACTOR PER FIELD CONSTRUCTION. THESE AS-BUILT CHANGES SHALL BE DATED AND SUBMITTED TO THE ENGINEER OF RECORD. THE ENGINEER OF RECORD SHALL PREPARE A COMPLETE SET OF "AS CONSTRUCTED" DRAWINGS AND DELIVER THE SETS TO THE FOUNTAIN SANITATION DISTRICT PRIOR TO FINAL ACCEPTANCE OF THE SANITARY SEWER SYSTEM.
7. WITH PRIOR APPROVAL, THE CONTRACTOR SHALL PROVIDE 3 DEGREE BENDS ON ALL CURVILINEAR SANITARY SEWER PIPE AT THE LOCATIONS DETAILED ON THE APPROVED CONSTRUCTION PLANS.
8. SANITARY SEWER SERVICE LINES SHALL BE LOCATED PER THE DETAIL ON THE UTILITY SERVICE PLAN, THE DIMENSIONS GIVEN AT EACH LOT WHERE A TYPICAL INSTALLATION IS REQUIRED OR AT THE DIRECTION OF THE FOUNTAIN SANITATION DISTRICT REPRESENTATIVE.
9. SERVICE STUBS SHALL BE INSTALLED A MINIMUM OF TEN (10) FEET INTO THE PROPERTY, UNLESS OTHERWISE SHOWN, AND THE END OF THE STUB SHALL BE MARKED WITH A 2"X4"X12' STEEL OR WOODEN POST PAINTED GREEN.
10. OVERLOT GRADING AND STREET SUBGRADE MUST BE WITHIN ± ONE (1) FOOT PRIOR TO ANY UTILITY INSTALLATION.
11. CONTRACTOR TO CONSTRUCT ALL MANHOLES AND STRUCTURES TO FINISHED GRADE.
12. ALL SANITARY SERVICE PIPE TO BE GREEN GASKET SDR35.
13. ALL 3° BENDS SHALL BE A SPIGOT X BELL FITTING. THE SPIGOT END OF EACH BEND FITTING SHALL BE INSERTED IN THE BELL OF A FULL PIECE (13 FEET) OF ASTM D3034 FOR PVC, SDR 26 OR 35 PIPE WITH THE SUBSEQUENT UPSTREAM PIPE SEGMENT BEING A FULL PIECE OF PIPE. EACH JOINT OF PIPE MAY BE DEFLECTED TO A MINIMUM RADIUS OF 200 FEET IN CONFORMANCE WITH THE MANUFACTURER'S SPECIFICATIONS BETWEEN EACH BEND FITTING. THE CONTRACTOR SHALL USE EXTREME CARE AND EXPERT WORKMANSHIP TO PROVIDE PROPER HORIZONTAL AND VERTICAL ALIGNMENT THROUGH SECTIONS WITH 3° BENDS.
14. MINIMUM RADIUS FOR SANITARY SEWER WITHOUT JOINT FITTINGS IS 267 FEET USING A 14-FOOT-LONG PIPE SEGMENT.
15. CONTRACTOR SHALL BE AWARE THAT WHEN DEBRIS IS DROPPED INTO MANHOLES AND OTHER STRUCTURES, THEY ARE TO IMMEDIATELY REMOVE THIS TO ELIMINATE THE POSSIBILITY OF PROPERTY DAMAGE DUE TO THE DEBRIS-CAUSING BACKUP INTO PRIVATE PROPERTIES. IF AND WHEN IT IS DETERMINED THAT DEBRIS CAUSED A BACKUP, THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR DAMAGES.
16. NO TREES ARE TO BE PLANTED WITHIN ANY SEWER EASEMENT OR WITHIN FIFTEEN (15) FEET OF ANY MANHOLE OR PIPE.
17. ACCESS TO MANHOLES AND INLETS SHALL BE MADE AVAILABLE FOR MAINTENANCE PURPOSES.
18. ALL MANHOLES SHALL RECEIVE AN EXTERIOR WATERPROOF COATING OF COAL TAR EPOXY, ICS DEVOE "DEVTAR," OR APPROVED EQUIVALENT.
19. ALL MANHOLES SHALL RECEIVE AN EXTERIOR JOINT WRAP TO BEST ASSURE WATERTIGHTNESS. REFER TO THE FOUNTAIN SANITATION DISTRICT STANDARD SPECIFICATIONS FOR MATERIALS AND INSTALLATION REQUIREMENTS.
20. ALL SANITARY SEWER MANHOLES ON THIS PROJECT SHALL BE SUBJECT TO VACUUM TESTING PRIOR TO THE CONSIDERATION OF ACCEPTANCE BY THE DISTRICT. AT THE DISTRICT'S SOLE OPTION, ADDITIONAL VACUUM TESTING MAY BE REQUIRED DURING AND PRIOR TO THE CONCLUSION OF THE WARRANTY PERIOD FOR THIS WORK. REFER TO THE FOUNTAIN SANITATION DISTRICT STANDARD SPECIFICATIONS FOR TESTING REQUIREMENTS.
21. CLASS "B" GRANULAR BEDDING SHALL BE UTILIZED FOR ALL WASTEWATER PIPELINE CONSTRUCTION ON THIS PROJECT. AS A MINIMUM, THE CLASS "B" BEDDING SHALL BE COMPRISED OF 3/4-INCH CRUSHED ROCK. LARGER AGGREGATE AND/OR ALTERNATIVE GRADATIONS MAY BE NECESSARY IN ORDER TO ADDRESS TRENCH SUBGRADE STABILIZATION CONDITIONS FOUND UPON EXCAVATION OF THE TRENCH IN ADDITION TO THE SPECIFIED CLASS "B" PIPE BEDDING.
22. WHERE NECESSARY, THE CONTRACTOR SHALL PROVIDE 3° BENDS ON ALL CURVILIVEAR SANITARY SEWER PIPE AT THE LOCATIONS SHOWN ON THE PLANS.
23. SANITARY SEWER PIPE SHALL BE POLYVINYL CHLORIDE (PVC), SDR 35, IN ACCORDANCE WITH ASTM D3034 FOR DEPTHS UP TO SIXTEEN (16) FEET. SANITARY SEWER LINES WITH COVER EXCEEDING SIXTEEN (16) FEET FROM FINISHED GRADE SHALL BE POLYVINYL CHLORIDE (PVC), SDR 26, IN ACCORDANCE WITH ASTM D3034. ALL SDR 26 PIPE SHALL BE BEDDED IN CLASS B BEDDING MATERIAL OR WITH RECLAIMED CONCRETE MATERIAL MEETING SANITATION DISTRICT STANDARD.
24. MANHOLES SHALL BE STANDARD PRECAST CONCRETE.
25. ALL SANITARY SEWER MANHOLES <u>SHALL NOT</u> HAVE ANY ACCESS STEPS INSTALLED INSIDE THE MANHOLE. ANY PRECAST SANITARY MANHOLES WITH STEPS SHALL HAVE THE STEPS REMOVED BY SAW CUTTING STEPS FLUSH TO THE MANHOLE AND ADDING EPOXY TO THE CUT ENDS OF THE STEPS.
26. SANITARY SEWER MH COVERS SHALL BE LOCATED ALONG THE CENTERLINE OF THE STREET OR AS CLOSE TO THE CENTERLINE AS IS PRACTICAL.
27. IF GROUNDWATER IS ENCOUNTERED DURING TRENCHING THEN THE TRENCH SHALL BE OVEREXCAVATED AND DEWATERED. WELL POINTS SHALL BE PLACED AS NECESSARY TO PREVENT WATER IN THE TRENCH. THE GROUNDWATER LEVEL SHALL BE KEPT 12-INCHES OR MORE BELOW THE UTILITY BEING INSTALLED. OVEREXCAVATED TRENCH DEPTH SHALL BE BACKFILLED WITH 2-INCH MINUS ROCK WITH <5% PASSING NO. 4 SIEVE. DEWATERING SHALL CONTINUE UNTIL SUCH TIME AS IT IS SAFE TO ALLOW THE WATER TABLE TO RISE IN THE EXCAVATION. PIPE TRENCHES SHALL CONTAIN ENOUGH BACKFILL TO PREVENT PIPE FLOATATION.
28. IN AREAS WHERE SANITARY SEWER WILL BE PLACED ON FILL THE CONTRACTOR SHALL SUPPLY THE FOUNTAIN SANITATION DISTRICT WITH SOIL DENSITY REPORTS PRIOR TO COMMENCING CONSTRUCTION OF THE PIPELINES. THE DENSITY REPORTS SHALL DEMONSTRATE THAT ALL FILLS PLACED WITHIN PIPELINE CONSTRUCTION SHALL BE COMPACTED TO A MINIMUM OF 95% STANDARD PROCTOR DENSITY OR PER GEOTECHNICAL RECOMMENDATION, WHICHEVER STANDARD IS STRICTER. ADDITIONALLY, FILLS SHALL BE PLACED TO A MINIMUM OF 6' ABOVE THE TOP OF THE PROPOSED PIPE PRIOR TO CONSTRUCTION OF THE PIPELINES.
29. THE SANITARY SEWER SERVICES TO BE CONSTRUCTED IN THIS PROJECT SHALL BE CONNECTED TO THE MAIN WITH IN-LINE WYE FITTINGS IN ACCORDANCE WITH FOUNTAIN SANITATION DISTRICT DESIGN CRITERIA AND CONSTRUCTION SPECIFICATIONS. EACH WYE FITTING WILL BE LOCATED NO LESS THAN 3-FEET CLEAR FROM AN ADJACENT SERVICE LINE WYE FITTING. IF TWO (2) SERVICE LINES ARE LOCATED ON THE SAME SIDE OF THE WASTEWATER COLLECTION SYSTEM MAIN, THERE SHALL BE NO LESS THAN 4 FEET OF SPACE BETWEEN THE TWO SEPARATE SEWER SERVICE PIPELINES TO FACILITATE FUTURE EXCAVATION OF EACH WITHOUT DISTURBANCE.
30. ALL SANITARY SEWER MAINS AND PIPELINES SHALL BE CONSTRUCTED WITH COPPER TRACER WIRE, 6 GAUGE SOLID COPPER, EXTENDING FROM THE MANHOLE-TO-MANHOLE ON THE MAIN LINES. IN ADDITION, A COPPER TRACER WIRE SHALL EXTEND ALONG EACH SERVICE LINE, CONNECTED TO THE MAIN LINE COPPER TRACER WIRE, TO A LOCATION NO LESS THAN 10 FEET INSIDE THE LOT FRONTAGE. THE TRACER WIRES WILL BE CONTINUED AT THE TIME OF BUILDING SEWER CONSTRUCTION SUBJECT TO THE INSPECTION OF THE FOUNTAIN SANITATION DISTRICT.
31. THE TRACER WIRE WILL EXTEND UP THE OUTSIDE OF EACH MANHOLE AND BE INSERTED INTO THE MANHOLE INTERIOR UNDER ADJUSTING RINGS SET ON THE CONE WITH NO LESS THAN 1.5 FEET OF CONDUCTOR COILED AT THE MANHOLE INTERIOR.

FSD SANITARY SERVICE PLAN NOTES:

1. ALL CONSTRUCTION METHODS AND MATERIALS SHALL MEET FOUNTAIN SANITATION DISTRICT STANDARD SPECIFICIATIONS.
2. FINAL LOCATION OF ALL SEWER, WATER AND GAS SERVICES TO BE APPROVED IN THE FIELD BY THE CONSTRUCTION MANAGER AND DISTRICT INSPECTOR PRIOR TO INSTALLATION.
3. PROPERTY END OF ALL SEWER SERVICES TO BE MARKED WITH A 12'x2"x4" STEEL OR WOODEN POST EXTENDING VERTICALLY FROM THE FLOWLINE.
4. UTILITY LOCATIONS, WHETHER OR NOT SHOWN ON THIS PLAN, IN NO WAY RELIEVES THE CONTRACTOR FROM THE RESPONSIBILITY FOR CALLING FOR UTILITY LOCATIONS FROM THE APPROPRIATE AUTHORITIES PRIOR TO BEGINNING EXCAVATION. THE CONTRACTOR SHALL BE RESPONSIBLE TO LOCATE AND PROTECT ALL EXISTING UTILITIES WITHIN THE PROJECT. ANY DAMAGE TO EXISTING UTILITIES SHALL BE IMMEDIATELY REPAIRED AT THE CONTRACTOR'S SOLE EXPENSE.
5. REUSE OF ANY MATERIAL IS AT THE DISCRETION OF THE DISTRICT INSPECTOR.
6. ALL SANITARY SERVICES TO BE INSTALLED AT THE MINIMUM PERMISSIBLE GRADE OF 2.08% UNLESS OTHERWISE PRE-APPROVED BY THE FOUNTAIN SANITATION DISTRICT.
7. ALL SANITARY SERVICE PIPE SHALL BE GREEN GASKETED SDR35.
8. SANITARY SEWER SERVICE CONNECTIONS ARE TO BE A MINIMUM OF 5' FROM THE MANHOLE.
9. THE CONTRACTOR SHALL NOTIFY FOUNTAIN SANITATION DISTRICT'S INSPECTOR (382- 5303) 48 HOURS PRIOR TO THE START OF CONSTRUCTION TO OUTLINE METHODS OF CONSTRUCTION, MATERIALS TO BE USED AND CONSTRUCTION STAKING.
10. ALL SANITARY SEWER SERVICE LINES TO THE RESIDENTIAL LOTS SHALL BE 4-INCH DIAMETER PIPE. SEWER SERVICES SHALL BE EXTENDED 10' INTO THE RESIDENTIAL LOTS TO AVOID GAS, ELECTRIC AND WATER EASEMENTS ADJACENT TO THE RIGHT OF WAY.
11. ALL TRENCH BACKFILL AND COMPACTION SHALL BE IN ACCORDANCE WITH SECTION PART C, ARTICLE II OF THE FOUNTAIN SANITATION DISTRICT STANDARD SPECIFICATIONS MANUAL.

FSD GENERAL SERVICE PLAN NOTES

THE CONTRACTOR SHALL NOTIFY THE FOUNTAIN SANITATION DISTRICT OFFICE (719-382-5303) A MINIMUM OF 48 HOURS PRIOR TO THE START OF CONSTRUCTION.

<u>GENERAL:</u>

1. ALL CONSTRUCTION METHODS AND MATERIALS SHALL MEET FOUNTAIN SANITATION DISTRICT STANDARD SPECIFICIATIONS.
2. FOUNTAIN SANITATION DISTRICT DOES NOT GUARANTEE THE ACCURACY OF LOCATIONS OF EXISTING PIPELINES, MANHOLES, AND SERVICE LINES. IF FIELD CONDITIONS ARE FOUND TO BE DIFFERENT THAN SHOWN ON THE PLANS, THE CONTRACTOR SHALL NOTIFY THE DISTRICT INSPECTOR AND THE DESIGN ENGINEER IMMEDIATELY.
3. THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE TO ANY UTILITY FACILITIES AS A RESULT OF THEIR ACTIONS. THE CONTRACTOR SHALL MAKE ALL THE REQUIRED REPAIRS IMMEDIATELY TO THE SATISFACTION OF FOUNTAIN SANITATION DISTRICT.
4. ALL FIELD STAKING SHALL COMPLY WITH THE WASTEWATER STANDARD SPECIFICATIONS.
5. FINAL LOCATION OF ALL WASTEWATER SERVICES SHALL BE APPROVED IN THE FIELD BY THE DISTRICT INSPECTOR.
6. ALL TRENCH BACKFILL AND COMPACTION SHALL BE IN ACCORDANCE WITH SECTION PART C, ATRICLE II OF THE FOUNTAIN SANITATION DISTRICT STANDARD SPECIFICATIONS MANUAL.

WIDEFIELD WATER AND SANITATION DISTRICT GENERAL NOTES

1. ALL UTILITY CONSTRUCTION TO BE CONDUCTED IN CONFORMANCE WITH THE CURRENT WIDEFIELD WATER AND SANITATION DISTRICT SPECIFICATIONS. COMPACTION REQUIREMENTS SHALL BE 95% STANDARD PROCTOR AS DETERMINED BY ASTM D698, UNLESS OTHERWISE APPROVED BY THE WIDEFIELD WATER AND SANITATION DISTRICT OR A HIGHER STANDARD IS IMPOSED BY ANOTHER AGENCY HAVING RIGHT-OF-WAY JURISDICTION.
2. ALL MATERIALS AND WORKMANSHIP SHALL BE SUBJECT TO INSPECTION BY THE WIDEFIELD WATER AND SANITATION DISTRICT. THE WIDEFIELD WATER AND SANITATION DISTRICT RESERVES THE RIGHT TO ACCEPT OR REJECT ANY SUCH MATERIALS AND WORKMANSHIP THAT DOES NOT CONFORM TO ITS STANDARDS AND SPECIFICATIONS.
3. THE DEVELOPER OR HIS ENGINEER HAS LOCATED ALL FIRE HYDRANTS AND FUTURE SERVICE STUBS. ANY REQUIRED REALIGNMENT, EITHER HORIZONTAL OR VERTICAL, SHALL BE AT THE EXPENSE OF THE DEVELOPER.
4. ALL DUCTILE IRON PIPE, TO INCLUDE FITTINGS, VALVES AND FIRE HYDRANTS WILL BE WRAPPED WITH POLYETHYLENE TUBING, AND ELECTRICALLY ISOLATED.
5. ALL DUCTILE IRON PIPE AND FITTINGS SHALL BE DOUBLE BONDED. SPECIFICATIONS FOR CATHODIC PROTECTION ON BOTH DIP MAINS AND PVC MAINS IS SPECIFIED IN THE STANDARDS AND SPECIFICATIONS.
6. PVC MAIN LINES SHALL BE INSTALLED WITH COATED NO. 12 TRACER WIRE.
7. THE CONTRACTOR IS REQUIRED TO NOTIFY THE WIDEFIELD WATER AND SANITATION DISTRICT (390-7111) A MINIMUM OF 48 HOURS AND A MAXIMUM OF 96 HOURS PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL ALSO NOTIFY AFFECTED UTILITY COMPANIES 48 HOURS PRIOR TO CONSTRUCTION ADJACENT TO THE KNOWN UTILITY LINES.
8. THE LOCATION OF ALL UTILITIES AS SHOWN ON THESE DRAWINGS ARE APPROXIMATE ONLY. THE LOCATION OF ALL UTILITIES SHALL BE VERIFIED PRIOR TO CONSTRUCTION BY THE CONTRACTOR.
9. THE CONTRACTOR SHALL FIELD EXCAVATE AND VERIFY THE VERTICAL AND HORIZONTAL LOCATION OF ALL TIE-INS. CONTRACTOR SHALL NOTIFY THE WIDEFIELD WATER AND SANITATION DISTRICT AND THE ENGINEER OF THE FIELD VERIFIED INFORMATION PRIOR TO CONSTRUCTION.
10. ALL BENDS SHALL BE FIELD STAKED PRIOR TO CONSTRUCTION.
11. ANY WATER UTILITY MATERIAL REMOVED AND NOT REUSED SHALL BE RETURNED TO THE WIDEFIELD WATER AND SANITATION DISTRICT IF THE DISTRICT SO REQUESTS.
12. THE CONTRACTOR SHALL AT HIS EXPENSE SUPPORT AND PROTECT ALL UTILITY MAINS SO THAT THEY WILL FUNCTION CONTINUOUSLY DURING CONSTRUCTION. SHOULD A UTILITY MAIN FAIL AS A RESULT OF THE CONTRACTOR'S OPERATION, IT WILL BE REPLACED IMMEDIATELY BY EITHER THE CONTRACTOR OR THE WIDEFIELD WATER AND SANITATION DISTRICT AT FULL COST OF LABOR AND MATERIALS TO THE CONTRACTOR.
13. ANY PUMPING OR BYPASS OPERATIONS MUST BE REVIEWED AND APPROVED PRIOR TO EXECUTION BY BOTH THE WIDEFIELD WATER AND SANITATION DISTRICT AND THE ENGINEER.
14. CONTRACTOR MUST REPLACE OR REPAIR ANY DAMAGE TO ALL SURFACE IMPROVEMENTS, INCLUDING BUT NOT LIMITED TO FENCES, CURB AND GUTTER AND/OR ASPHALT THAT MAY BE CAUSED DURING CONSTRUCTION.
15. ALL WATER LINES 6" AND LARGER, AND ALL SEWER LINES 8" AND LARGER, SHALL HAVE AS "AS-BUILT" PLANS PREPARED AND APPROVED PRIOR TO FINAL ACCEPTANCE BY THE WIDEFIELD WATER AND SANITATION DISTRICT.
16. PRIOR TO CONSTRUCTION, A PRE-CONSTRUCTION CONFERENCE IS REQUIRED A MINIMUM OF 72 HOURS IN ADVANCE OF COMMENCEMENT OF WORK. TO SET THE PRE-CONSTRUCTION CONFERENCE, CONTACT BRANDON BERNARD-WATER DIVISION MANAGER AND/OR JASON DREESSEN, WASTEWATER DIVISION MANAGER AT (719)955-0548 OF THE WIDEFIELD WATER AND SANITATION DISTRICT FOR A TIME. NO PRE-CONSTRUCTION CONFERENCE TIMES WILL BE SET UNTIL 4 SETS OF SIGNED DRAWINGS ARE RECEIVED BY THE WIDEFIELD W & S DISTRICT. PRE-CONSTRUCTION DATE/INITIALS _____ .

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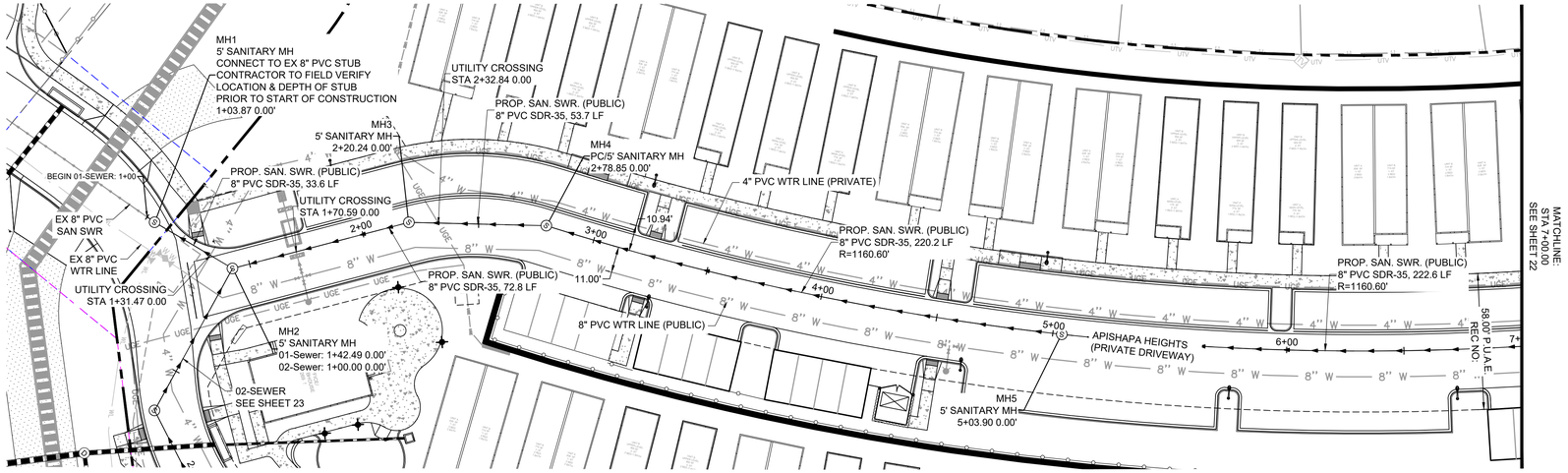

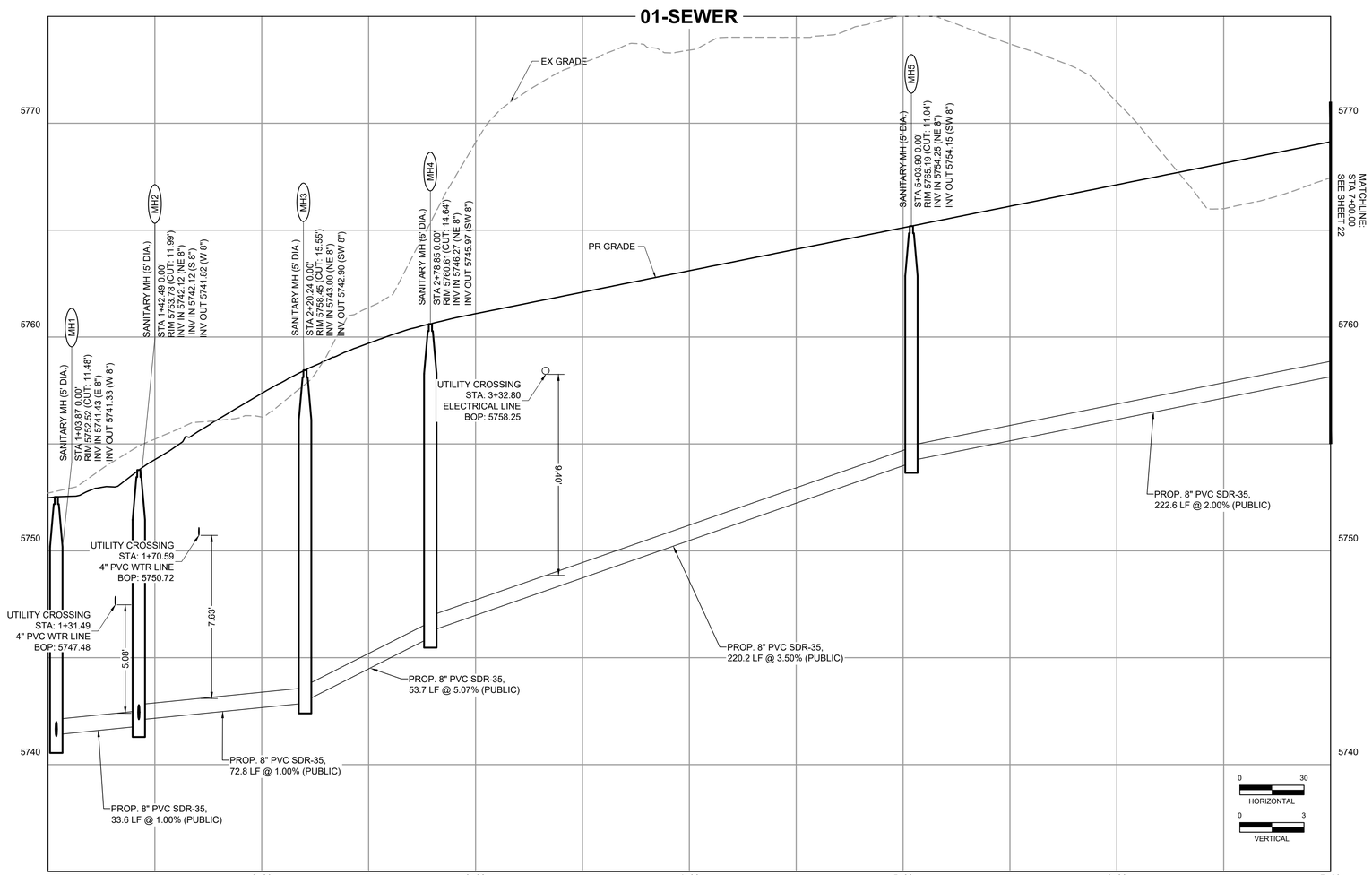

DEVELOPERS STATEMENT - FOUNTAIN SANITATION DISTRICT

THE OWNER WILL COMPLY WITH THE REQUIREMENTS OF FOUNTAIN SANITATION DISTRICT REGULATIONS AND STANDARD SPECIFICATIONS. OWNER WILL COMPLY WITH THE CONSTRUCTION DRAWINGS PREPARED BY HIS/HER CIVIL ENGINEER.

DEVELOPER/OWNER SIGNATURE: _____ DATE: _____

NAME OF DEVELOPER/OWNER: _____

TITLE: _____

PHONE: _____

ADDRESS: _____

FOUNTAIN SANITATION DISTRICT

PLANS ARE RECOMMENDED FOR USE IN CONSTRUCTION OF WASTEWATER COLLECTION SYSTEM FOR THIS PROJECT.
DESIGN ENGINEER OF RECORD TAKES SOLE RESPONSIBILITY FOR ALL DESIGN ASPECTS OF THE PROJECT.

_____ _____
JONATHAN MOORE, P.E. DATE
FOUNTAIN SANITATION DISTRICT – DISTRICT ENGINEER

NORTH
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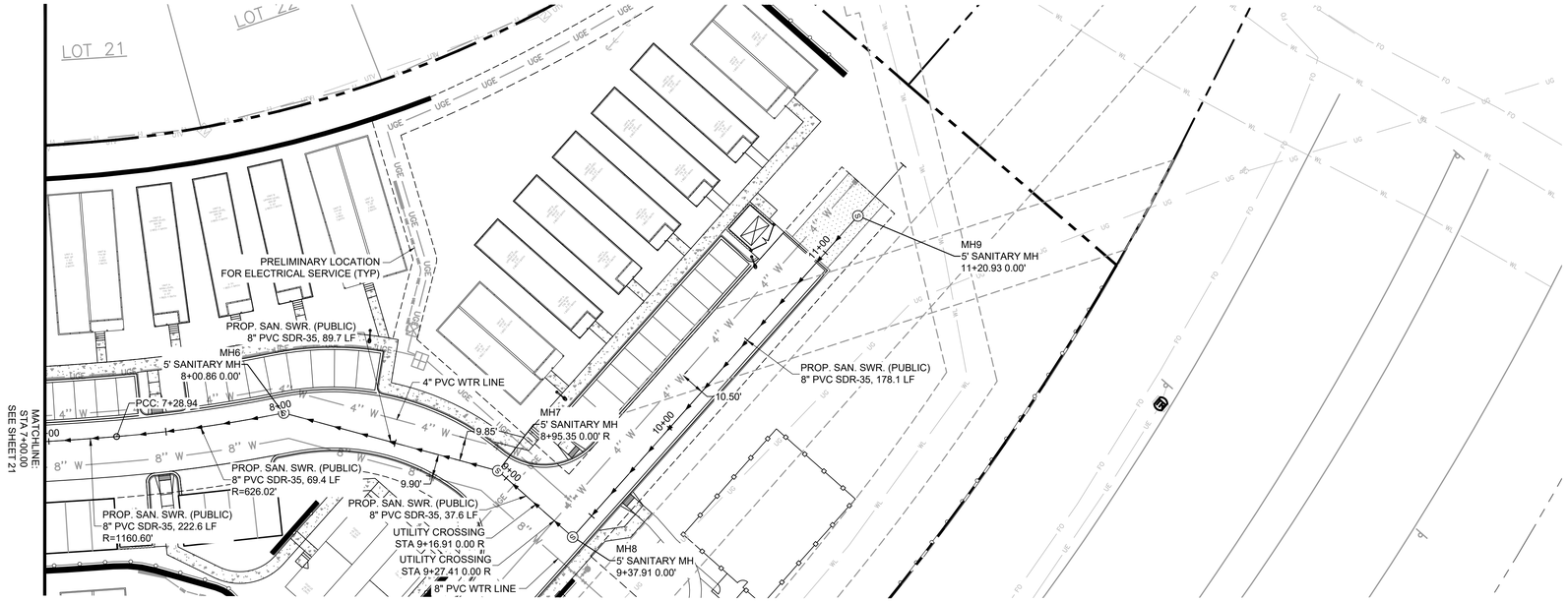

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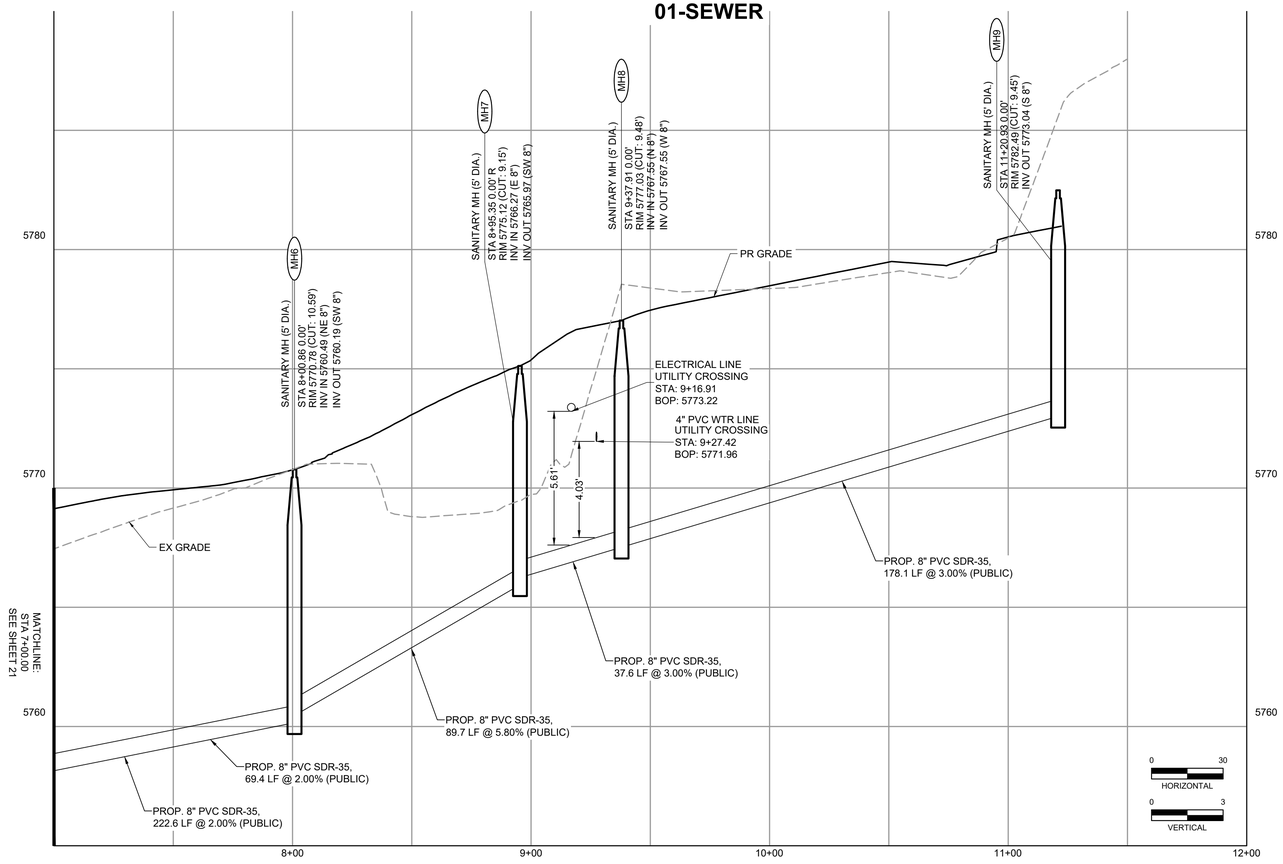

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FOUNTAIN SANITATION DISTRICT

PLANS ARE RECOMMENDED FOR USE IN CONSTRUCTION OF WASTEWATER COLLECTION SYSTEM FOR THIS PROJECT.
DESIGN ENGINEER OF RECORD TAKES SOLE RESPONSIBILITY FOR ALL DESIGN ASPECTS OF THE PROJECT.

_____ _____
JONATHAN MOORE, P.E. DATE
FOUNTAIN SANITATION DISTRICT – DISTRICT ENGINEER

NORTH
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15

NOT FOR CONSTRUCTION

PCD FILNE NO.: SF2214

DRAWN BY: CBM	JOB DATE: 8/31/2022	BAR IS ONE INCH ON OFFICIAL DRAWINGS. 0 1" IF NOT ONE INCH, ADJUST SCALE ACCORDINGLY.	
APPROVED: KMH	JOB NUMBER: 200541		
CAD DATE: 8/31/2022			
CAD FILE: J:\2020\200541\CAD\Dwgs\C\CD\El _Paso_Co\Sanitary			

NO.	DATE	BY	REVISION DESCRIPTION

HRGreen
HR GREEN - COLORADO SPRINGS
7222 COMMERCE CENTER DR SUITE 220
COLORADO SPRINGS CO 80919
PHONE: 719.300.4140 TOLL FREE: 800.728.7805
FAX: 844.273.1057 | HRGreen.com

THE COTTAGES AT MESA RIDGE
GOODWIN KNIGHT
EL PASO COUNTY, COLORADO

GOODWIN KNIGHT

EL PASO COUNTY CONSTRUCTION DOCUMENTS
SANITARY PLAN & PROFILE

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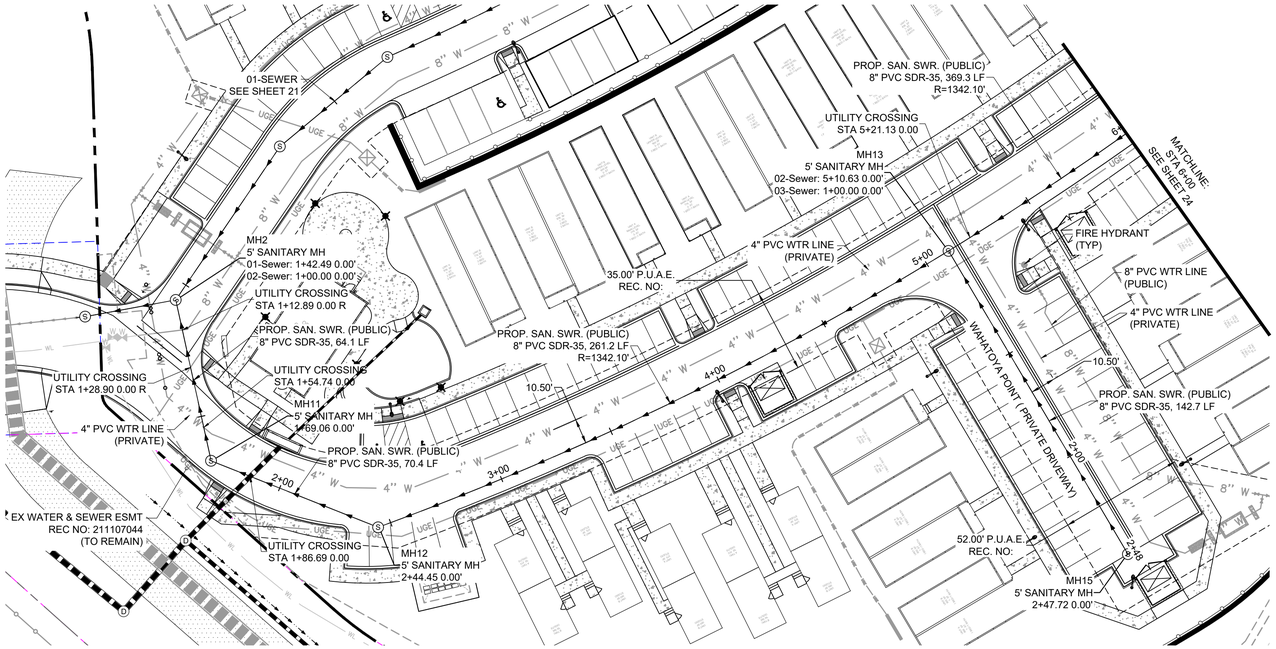
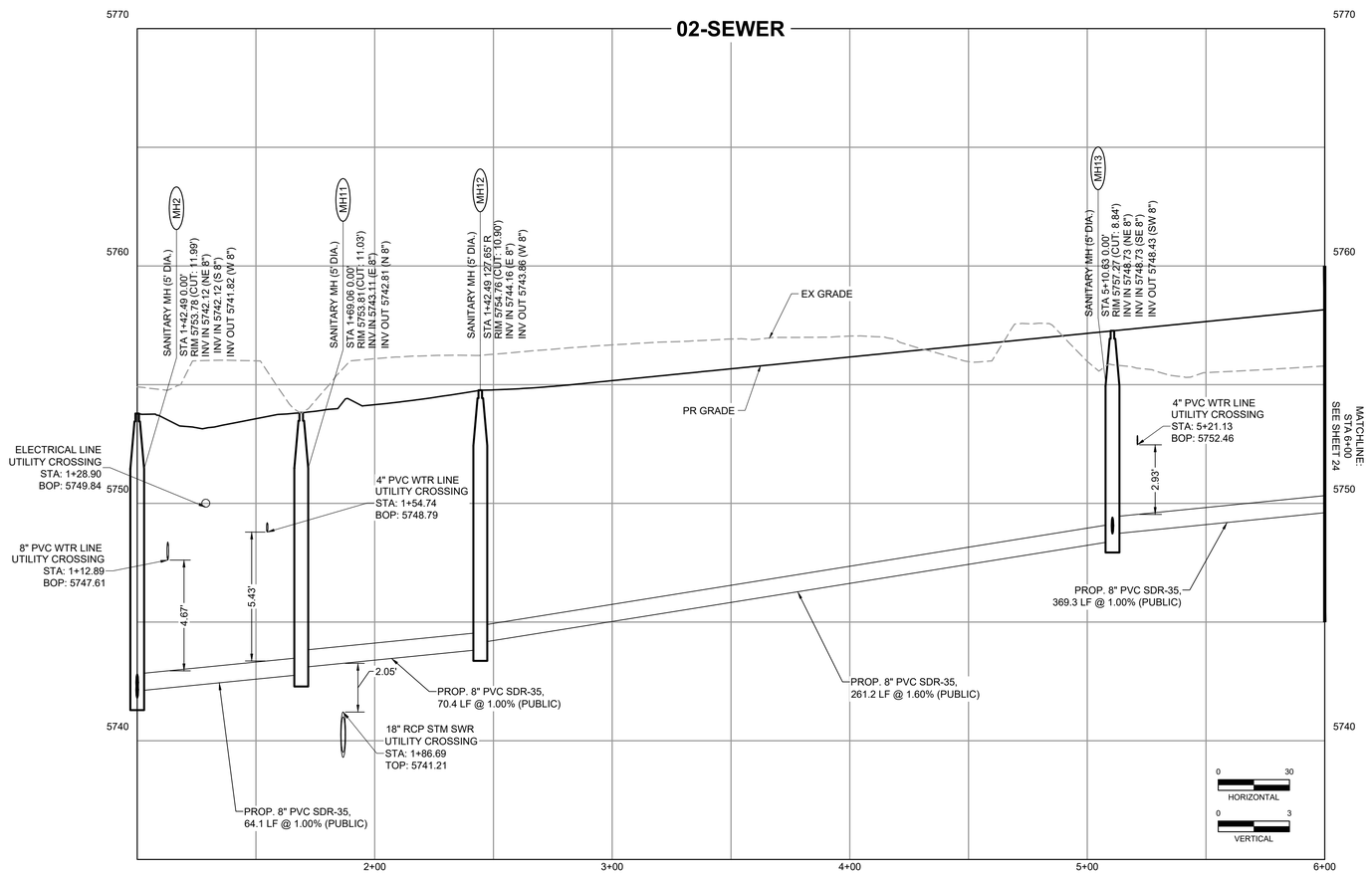
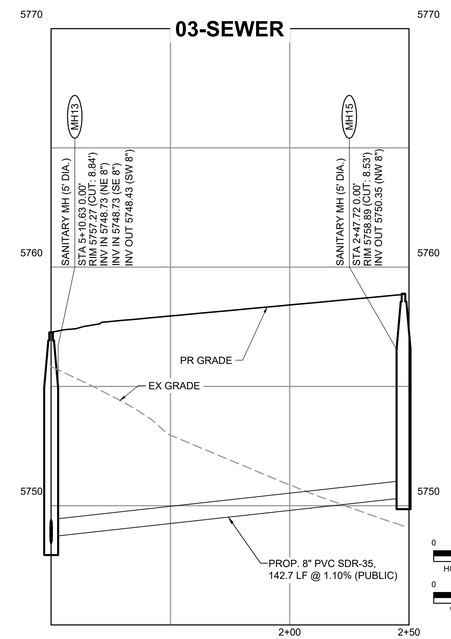
22







DEVELOPERS STATEMENT - FOUNTAIN SANITATION DISTRICT

THE OWNER WILL COMPLY WITH THE REQUIREMENTS OF FOUNTAIN SANITATION DISTRICT REGULATIONS AND STANDARD SPECIFICATIONS. OWNER WILL COMPLY WITH THE CONSTRUCTION DRAWINGS PREPARED BY HIS/HER CIVIL ENGINEER.

DEVELOPER/OWNER SIGNATURE: _____ DATE: _____

NAME OF DEVELOPER/OWNER: _____

TITLE: _____

PHONE: _____

ADDRESS: _____

FOUNTAIN SANITATION DISTRICT

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JONATHAN MOORE, P.E. DATE
FOUNTAIN SANITATION DISTRICT – DISTRICT ENGINEER

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EL PASO COUNTY CONSTRUCTION DOCUMENTS
SANITARY PLAN & PROFILE

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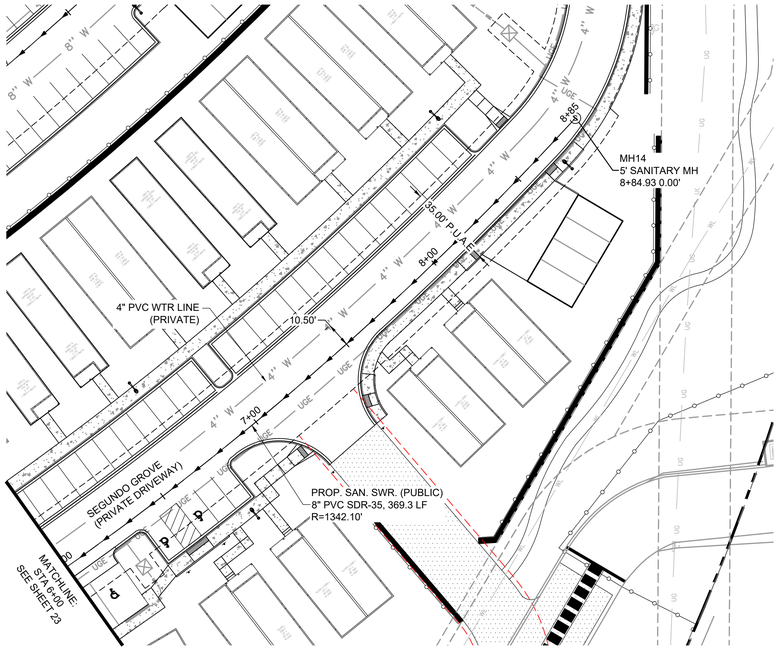
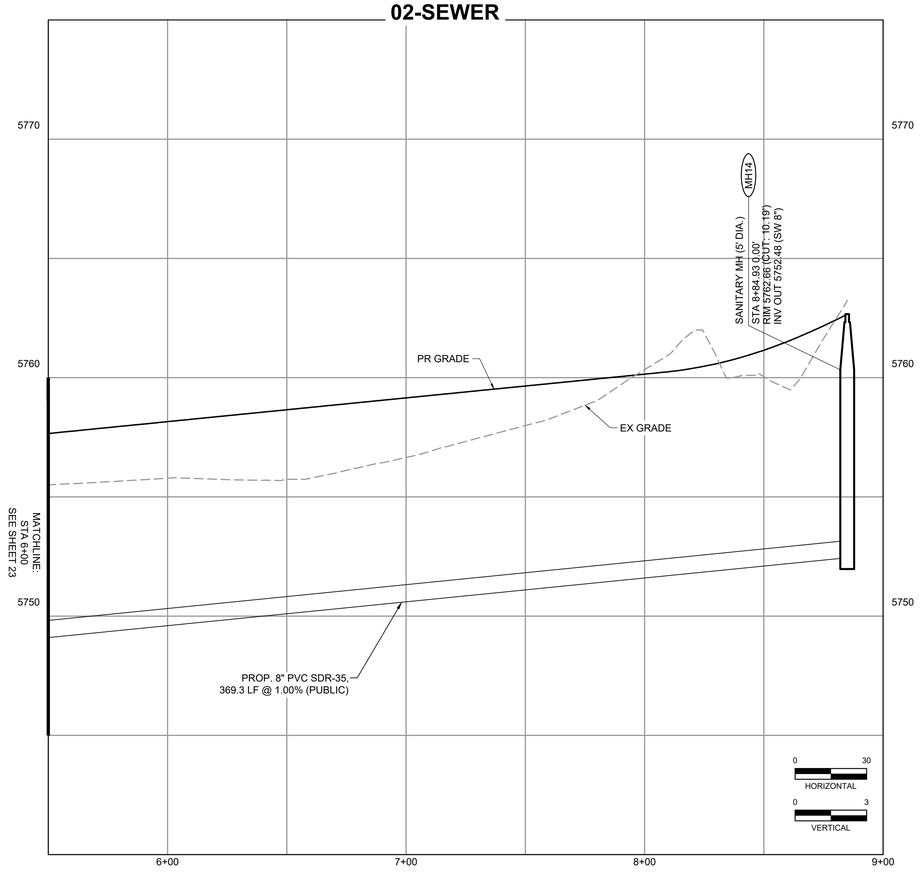


02-SEWER



DEVELOPERS STATEMENT - FOUNTAIN SANITATION DISTRICT

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NAME OF DEVELOPER/OWNER: _____

TITLE: _____

PHONE: _____

ADDRESS: _____

FOUNTAIN SANITATION DISTRICT

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JONATHAN MOORE, P.E. DATE
FOUNTAIN SANITATION DISTRICT – DISTRICT ENGINEER

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EL PASO COUNTY, COLORADO

EL PASO COUNTY CONSTRUCTION DOCUMENTS
SANITARY PLAN & PROFILE

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WATER and SEWER MAIN EXTENSIONS

Any changes or alterations affecting the grade, alignment, elevation and/or depth of cover of any water or sewer mains or other appurtenance shown on this drawing shall be the responsibility of the Owner/Developer. The Owner/Developer shall be responsible for all operational damages and defects in installation and material for mains and services from the date of approval until final acceptance is issued.

Signed _____ Date _____
Owner/Developer

Print Name _____

DBA _____

Address _____

DISTRICT APPROVALS

The Widefield Water and Sanitation District recognizes the design engineer as having responsibility for the
design and has limited its scope of review accordingly.

WIDEFIELD WATER AND SANITATION DISTRICT
WATER DESIGN APPROVAL

Date: _____ By: _____

PROJECT NO. _____

In case of errors or omissions with the water design as shown on this document the standards as defined in the "Rules and Regulations for Installation of Water Mains and Services" shall rule.

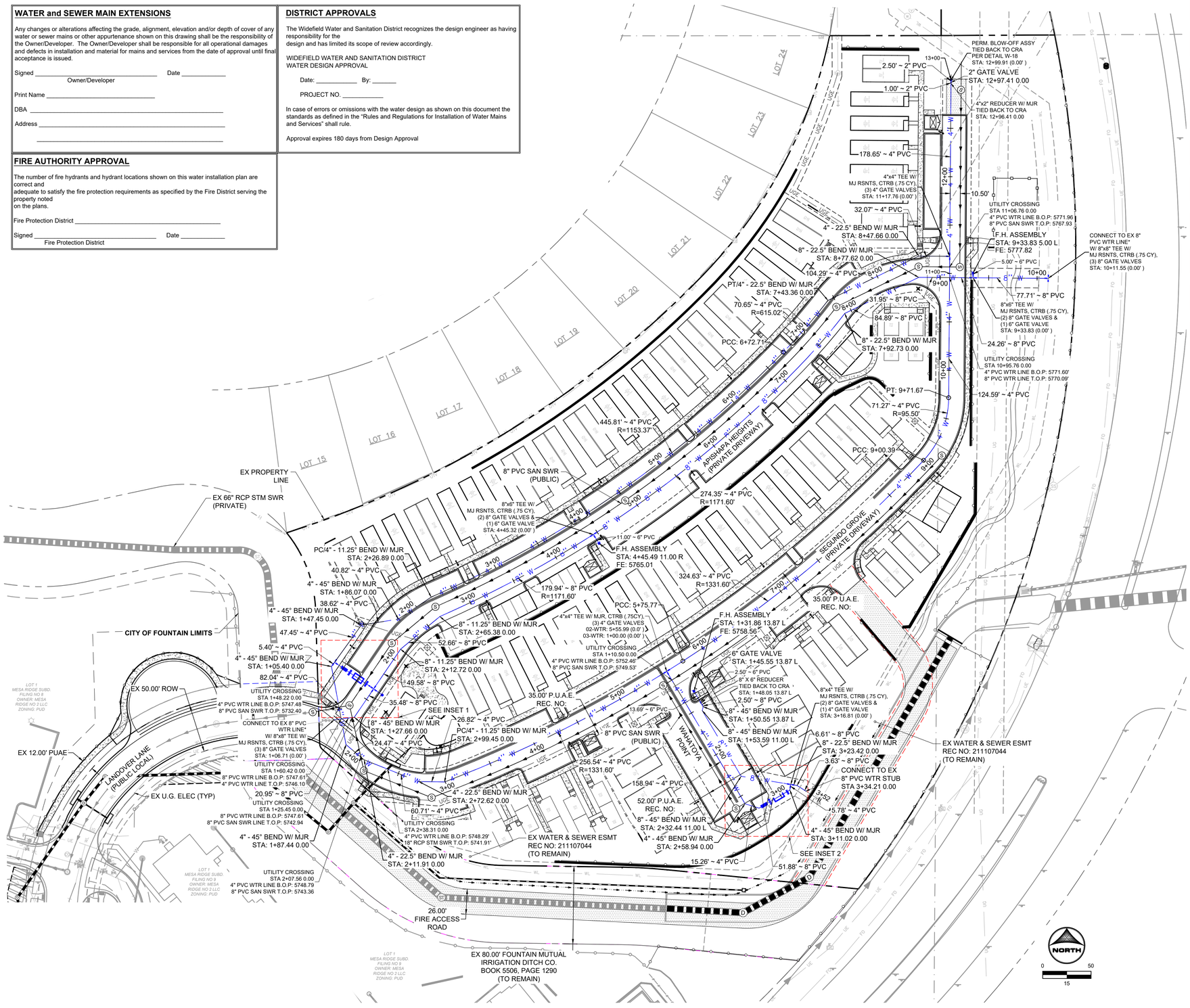
Approval expires 180 days from Design Approval

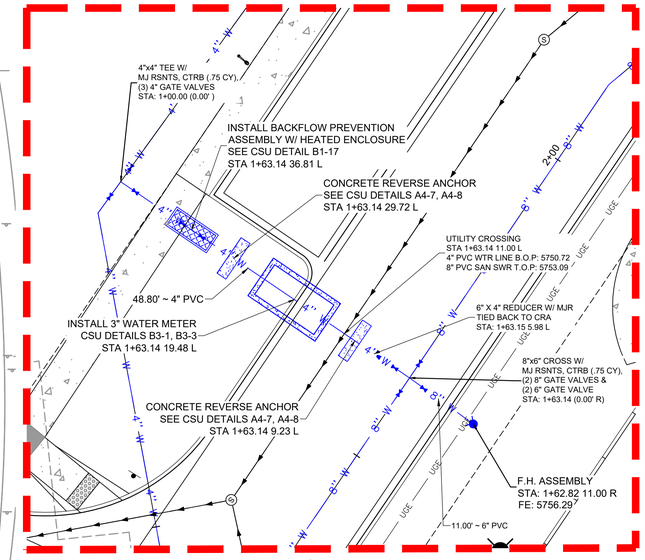
FIRE AUTHORITY APPROVAL

The number of fire hydrants and hydrant locations shown on this water installation plan are correct and
adequate to satisfy the fire protection requirements as specified by the Fire District serving the property noted
on the plans.

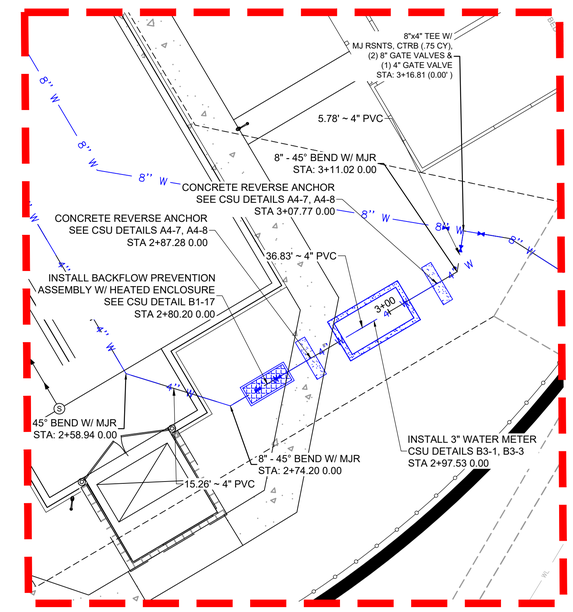
Fire Protection District _____

Signed _____ Date _____
Fire Protection District





INSET 1



INSET 2

NOT FOR CONSTRUCTION

PCD FILNE NO.: SF2214

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NO.	DATE	BY	REVISION DESCRIPTION

HRGreen

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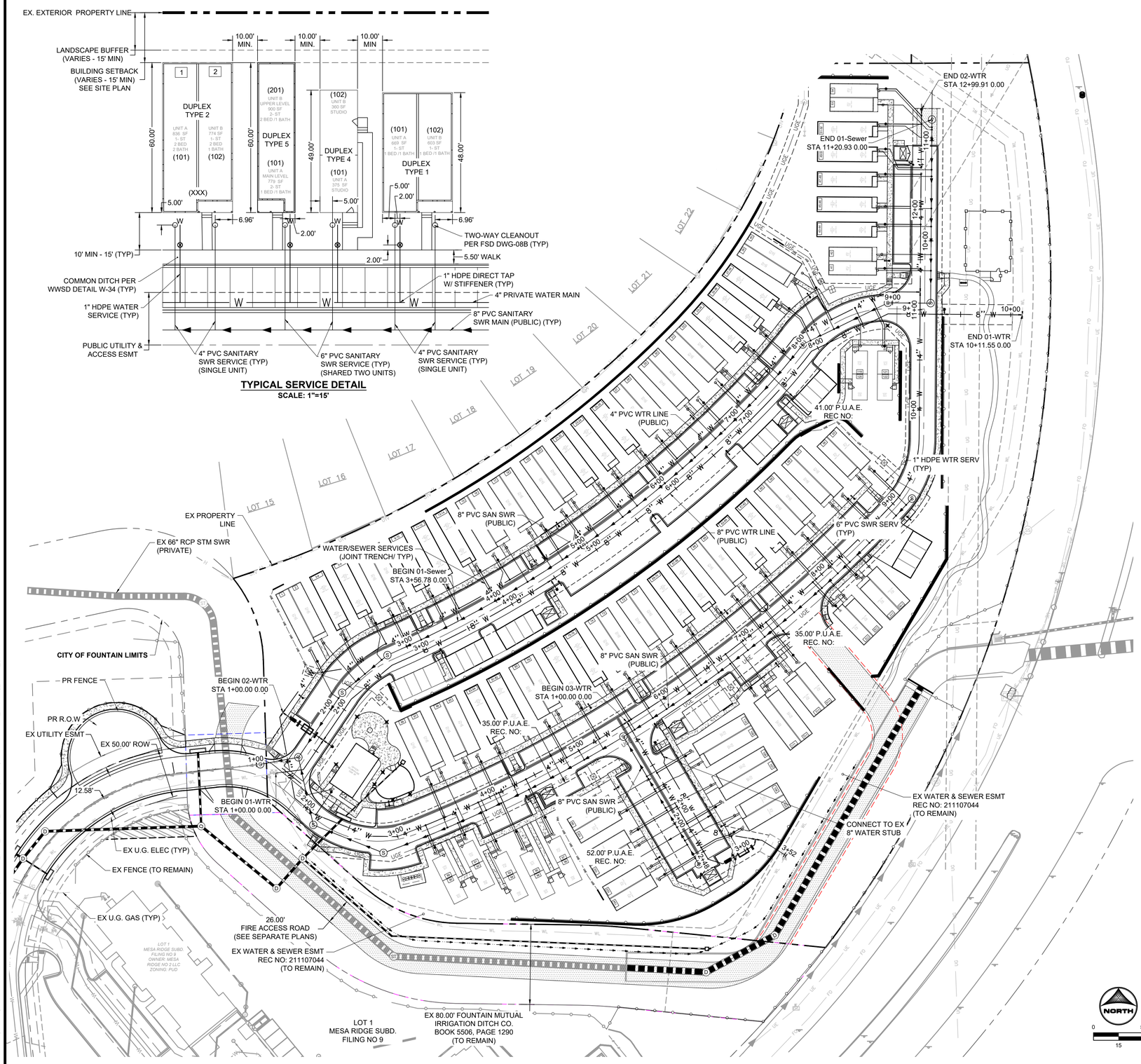
THE COTTAGES AT MESA RIDGE
GOODWIN KNIGHT
EL PASO COUNTY, COLORADO

GOODWIN KNIGHT

CITY OF FOUNTAIN CONSTRUCTION DOCUMENTS
WATER DISTRIBUTION PLAN

SHEET WP

HR GREEN Xrefs: xc-cow; xc-util; xv-dsgn; xv-dsgn-apts; xv-row; xv-row-apts; xv-util-apts; xc-dsgn; xv-util; Fin_street_approval_block; xc-dsgn-ftn; xg-l-arch dh01-CDs_EPC; WWSD_water_approval_block



SEWER SERVICES

LOT	ALIGNMENT	STATION	OFFSET	LOT	ALIGNMENT	STATION	OFFSET	LOT	ALIGNMENT	STATION	OFFSET
CH	02-Sewer	STA 1+38.37	0.0'	41	01-Sewer	STA 9+70.23	0.0' R	83-84	02-Sewer	STA 3+90.68	0.0'
1	01-Sewer	STA 2+13.72	0.0'	42	01-Sewer	STA 9+86.27	0.0'	85	02-Sewer	STA 3+69.35	0.0'
2	01-Sewer	STA 2+37.90	0.0'	43-44	01-Sewer	STA 10+14.23	0.0'	86	02-Sewer	STA 3+55.30	0.0' L
3-4	01-Sewer	STA 2+49.75	0.0'	45-46	01-Sewer	STA 10+32.23	0.0'	87	02-Sewer	STA 3+30.96	0.0' L
5-6	01-Sewer	STA 2+71.44	0.0' L	47-48	01-Sewer	STA 10+64.23	0.0'	88	02-Sewer	STA 3+13.00	0.0' L
7	01-Sewer	STA 2+99.91	0.0'	49-50	01-Sewer	STA 10+70.90	0.0' R	89-90	02-Sewer	STA 2+91.75	0.0'
8	01-Sewer	STA 3+15.96	0.0'	51-52	01-Sewer	STA 11+03.11	0.0'	91-92	02-Sewer	STA 3+24.33	0.0'
9-10	01-Sewer	STA 3+43.92	0.0'	53	01-Sewer	STA 11+10.78	0.0'	93-94	02-Sewer	STA 3+49.35	0.0'
11-12	01-Sewer	STA 3+61.64	0.0'	54	01-Sewer	STA 11+13.28	0.0'	95-96	02-Sewer	STA 3+71.85	0.0' R
13-14	01-Sewer	STA 3+98.98	0.0'	55	02-Sewer	STA 8+76.31	0.0'	97-98	02-Sewer	STA 4+02.65	0.0'
15	01-Sewer	STA 4+08.40	0.0'	56	02-Sewer	STA 8+61.57	0.0'	99	03-Sewer	STA 1+49.08	0.0'
16	01-Sewer	STA 4+36.70	0.0'	57	02-Sewer	STA 8+38.01	0.0' L	100	03-Sewer	STA 1+63.12	0.0'
17	01-Sewer	STA 4+64.42	0.0'	58	02-Sewer	STA 8+23.57	0.0'	101	03-Sewer	STA 1+85.12	0.0'
18	01-Sewer	STA 4+78.08	0.0' L	59	02-Sewer	STA 7+96.15	0.0'	102	03-Sewer	STA 2+01.17	0.0'
19	01-Sewer	STA 4+97.10	0.0'	60	02-Sewer	STA 7+79.72	0.0'	103	03-Sewer	STA 2+25.08	0.0'
20	01-Sewer	STA 5+20.54	0.0'	61-62	02-Sewer	STA 7+58.19	0.0'	104	03-Sewer	STA 2+40.72	0.0'
21-22	01-Sewer	STA 5+51.56	0.0'	63-64	02-Sewer	STA 7+21.44	0.0'	105	03-Sewer	STA 2+36.62	0.0'
23-24	01-Sewer	STA 5+69.76	0.0' L	65	02-Sewer	STA 6+99.70	0.0'	106	03-Sewer	STA 2+20.43	0.0' L
25-26	01-Sewer	STA 6+05.35	0.0' L	66	02-Sewer	STA 6+83.29	0.0'	107	03-Sewer	STA 2+05.05	0.0'
27	01-Sewer	STA 6+28.50	0.0'	67-68	02-Sewer	STA 6+61.88	0.0'	108	03-Sewer	STA 1+82.44	0.0'
28	01-Sewer	STA 6+44.96	0.0'	69-70	02-Sewer	STA 6+25.13	0.0'	109	03-Sewer	STA 1+61.12	0.0'
29	01-Sewer	STA 6+72.73	0.0'	71	02-Sewer	STA 6+03.70	0.0'	110	03-Sewer	STA 1+46.05	0.0'
30	01-Sewer	STA 6+85.67	0.0'	72	02-Sewer	STA 5+89.30	0.0'	111-112	02-Sewer	STA 6+39.69	0.0'
31	01-Sewer	STA 7+12.19	0.0'	73	02-Sewer	STA 5+61.75	0.0'	113-114	02-Sewer	STA 6+91.44	0.0'
32	01-Sewer	STA 7+28.94	0.0'	74	02-Sewer	STA 5+45.35	0.0'	115	02-Sewer	STA 7+53.80	0.0'
33-34	01-Sewer	STA 7+62.32	0.0'	75-76	02-Sewer	STA 5+23.84	0.0'	116	02-Sewer	STA 7+68.90	0.0'
35-36	01-Sewer	STA 7+81.29	0.0'	77-78	02-Sewer	STA 4+87.09	0.0'	117	02-Sewer	STA 7+89.92	0.0' L
37-38	01-Sewer	STA 8+09.57	0.0'	79	02-Sewer	STA 4+65.34	0.0' L	118	02-Sewer	STA 8+06.90	0.0'
39	01-Sewer	STA 8+20.55	0.0' R	80	02-Sewer	STA 4+48.94	0.0'	119-120	01-Sewer	STA 8+61.59	0.0' R
40	01-Sewer	STA 8+35.52	0.0' L	81-82	02-Sewer	STA 4+27.43	0.0' L	121-122	01-Sewer	STA 8+80.68	0.0' R

WATER SERVICES

LOT	ALIGNMENT	STATION	OFFSET	LOT	ALIGNMENT	STATION	OFFSET	LOT	ALIGNMENT	STATION	OFFSET
CH	02-WTR	STA 2+14.48	0.0'	41-42	02-WTR	STA 11+41.08	0.0'	83-84	02-WTR	STA 4+28.31	0.0'
1-2	01-WTR	STA 2+12.72	39.5' L	43-44	02-WTR	STA 11+85.08	0.0'	85-86	02-WTR	STA 4+07.44	0.0'
3-4	01-WTR	STA 2+41.41	24.2' L	45-46	02-WTR	STA 12+03.08	0.0' R	87-88	02-WTR	STA 3+51.24	0.0'
5-6	01-WTR	STA 2+68.80	21.9' L	47-48	02-WTR	STA 12+41.74	0.0'	89-90	02-WTR	STA 3+30.15	0.0' L
7-8	01-WTR	STA 2+88.16	22.0' L	49-50	02-WTR	STA 12+93.48	0.0'	91-92	02-WTR	STA 3+62.46	0.0' R
9-10	01-WTR	STA 3+33.01	22.0' L	51-52	02-WTR	STA 12+85.08	0.0' R	93-94	02-WTR	STA 3+87.30	0.0'
11-12	01-WTR	STA 3+51.07	22.0' L	53-54	02-WTR	STA 12+35.08	0.0' R	95-96	02-WTR	STA 4+09.94	0.0' R
13-14	01-WTR	STA 3+88.62	22.0' L	55-56	02-WTR	STA 9+10.38	0.0'	97-98	02-WTR	STA 4+40.19	0.0'
15-16	01-WTR	STA 4+10.38	22.0' L	57-58	02-WTR	STA 8+72.12	0.0' L	99-100	03-WTR	STA 1+75.84	0.0'
17-18	01-WTR	STA 4+68.51	22.0' L	59-60	02-WTR	STA 8+14.30	0.0'	101-102	03-WTR	STA 1+97.84	0.0'
19-20	01-WTR	STA 4+95.40	22.0' L	61-62	02-WTR	STA 7+92.95	0.0'	103-104	03-WTR	STA 2+49.84	0.0'
21-22	01-WTR	STA 5+42.64	22.0' L	63-64	02-WTR	STA 7+56.48	0.0'	105-106	03-WTR	STA 2+45.34	0.0'
23-24	01-WTR	STA 5+61.02	22.0' L	65-66	02-WTR	STA 7+18.63	0.0'	107-108	03-WTR	STA 2+17.77	0.0'
25-26	01-WTR	STA 5+97.29	22.0' L	67-68	02-WTR	STA 6+97.39	0.0'	109-110	03-WTR	STA 1+58.77	0.0' R
27-28	01-WTR	STA 6+20.62	22.0' L	69-70	02-WTR	STA 6+60.92	0.0'	111-112	02-WTR	STA 6+75.37	0.0'
29-30	01-WTR	STA 6+79.22	22.0' L	71-72	02-WTR	STA 6+39.66	0.0'	113-114	02-WTR	STA 7+26.63	0.0'
31-32	01-WTR	STA 7+05.69	22.0' L	73-74	02-WTR	STA 5+81.77	0.0'	115-116	02-WTR	STA 7+88.23	0.0'
33-34	01-WTR	STA 7+55.71	22.0' L	75-76	02-WTR	STA 5+60.99	0.0'	117-118	02-WTR	STA 8+24.35	0.0'
35-36	01-WTR	STA 7+75.36	22.0' L	77-78	02-WTR	STA 5+23.96	0.0'	119-120	01-WTR	STA 8+50.66	19.7' L
37-38	01-WTR	STA 7+98.28	19.7' L	79-80	02-WTR	STA 4+86.11	0.0'	121-122	01-WTR	STA 8+69.75	19.7' L
39-40	01-WTR	STA 8+24.59	19.7' L	81-82	02-WTR	STA 4+64.77	0.0'				

NOT FOR CONSTRUCTION

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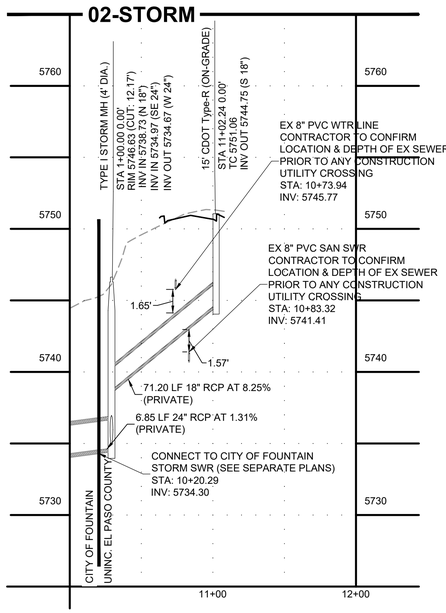
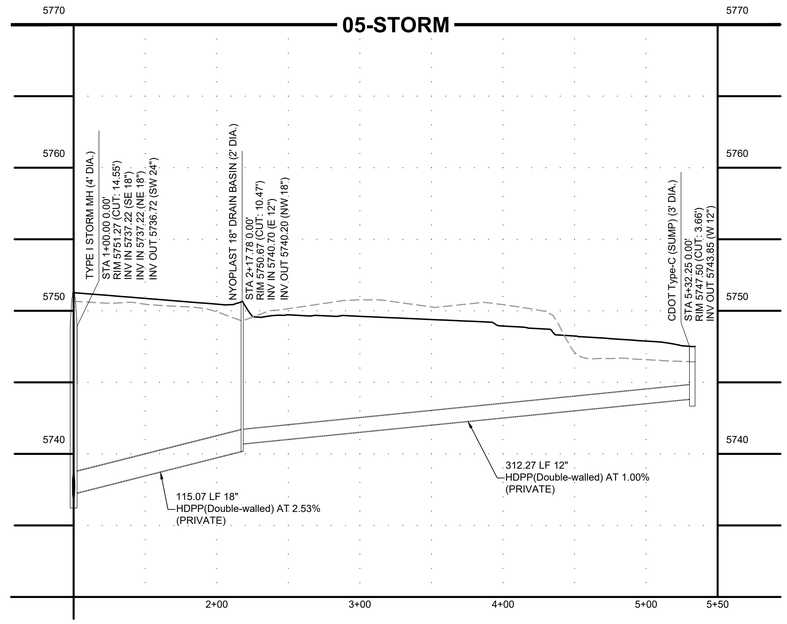
THE COTTAGES AT MESA RIDGE
GOODWIN KNIGHT
EL PASO COUNTY, COLORADO

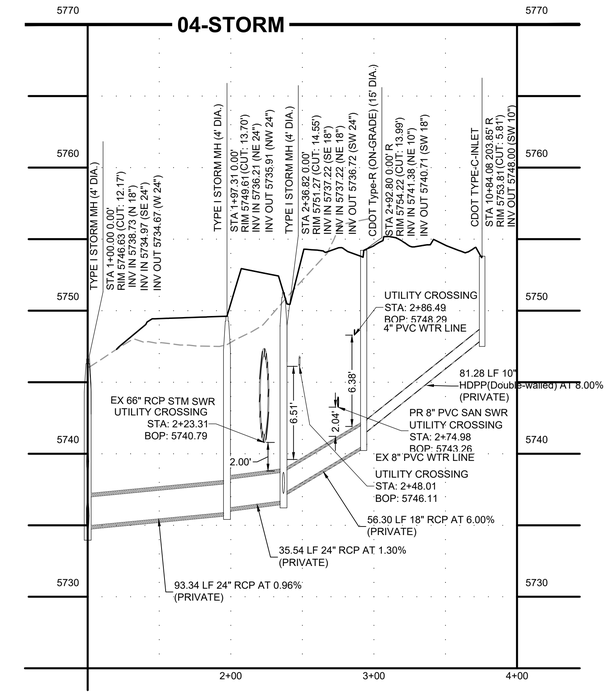
GOODWIN KNIGHT

EL PASO COUNTY CONSTRUCTION DOCUMENTS
UTILITY SERVICE PLAN

SHEET USP







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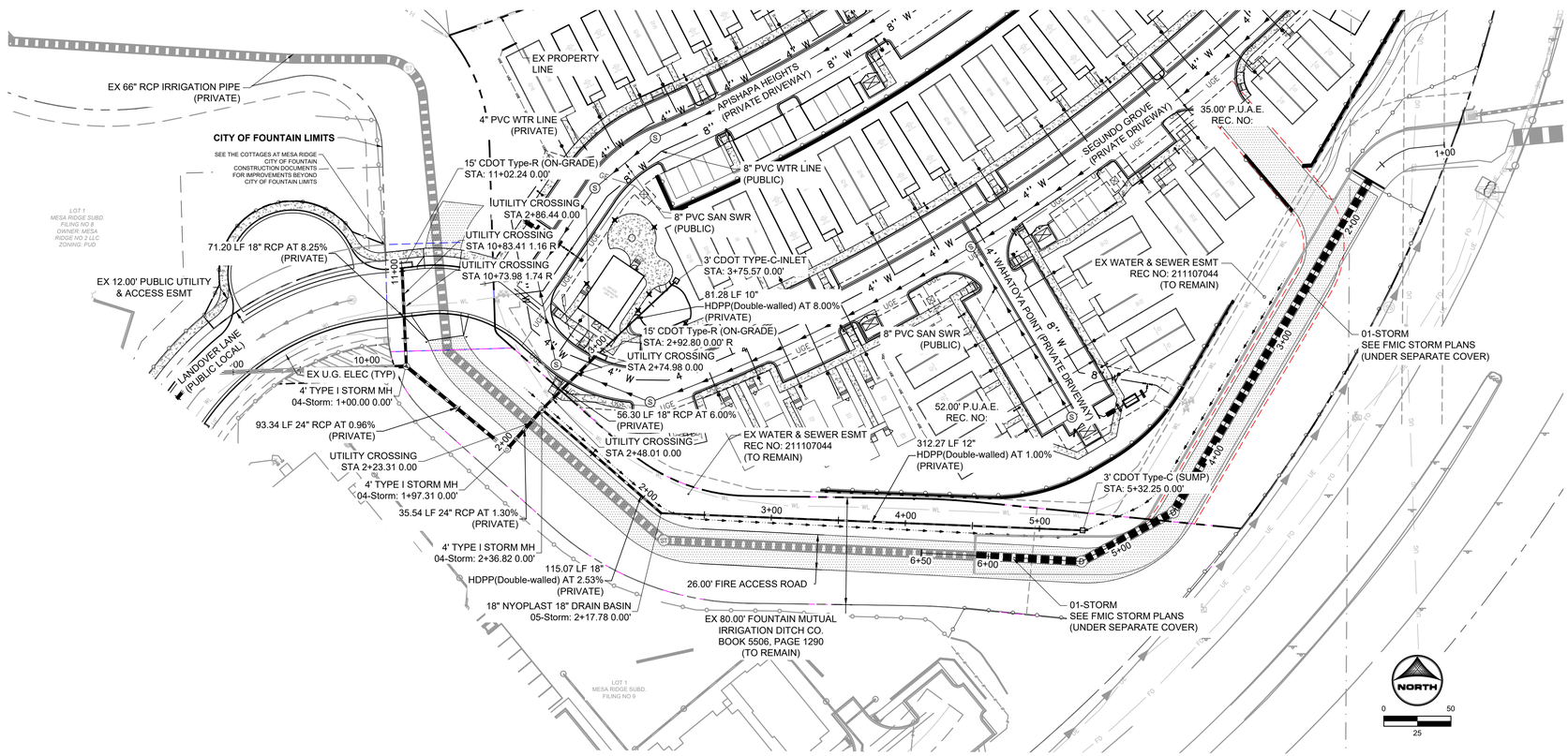

STORM SEWER CONSTRUCTION NOTES:

1. ALL RCP STORM SEWER TO BE CLASS III UNLESS OTHERWISE NOTED.
2. CONTRACTOR SHALL POTHOLE AND VERIFY DEPTH OF EXISTING UTILITY PRIOR TO THE START OF CONSTRUCTION. IF CONFLICTS ARE IDENTIFIED THE CONTRACTOR SHALL CONTACT THE ENGINEER IMMEDIATELY.

EL PASO COUNTY STATEMENT

COUNTY PLAN REVIEW IS PROVIDED ONLY FOR GENERAL CONFORMANCE WITH COUNTY DESIGN CRITERIA. THE COUNTY IS NOT RESPONSIBLE FOR THE ACCURACY AND ADEQUACY OF THE DESIGN, DIMENSIONS, AND/OR ELEVATIONS WHICH SHALL BE CONFIRMED AT THE JOB SITE. THE COUNTY THROUGH THE APPROVAL OF THIS DOCUMENT ASSUMES NO RESPONSIBILITY FOR COMPLETENESS AND/OR ACCURACY OF THIS DOCUMENT.

FILED IN ACCORDANCE WITH THE REQUIREMENTS OF THE EL PASO COUNTY LAND DEVELOPMENT CODE, DRAINAGE CRITERIA MANUAL VOLUMES 1 AND 2 & ENGINEERING CRITERIA MANUAL AS AMENDED.

IN ACCORDANCE WITH ECM SECTION 1.12, THESE CONSTRUCTION DOCUMENTS WILL BE VALID FOR CONSTRUCTION FOR A PERIOD OF 2 YEARS FROM THE DATE SIGNED BY THE EL PASO COUNTY ENGINEER. IF CONSTRUCTION HAS NOT STARTED WITHIN THOSE 2 YEARS. THE PLANS WILL NEED TO BE RESUBMITTED FOR APPROVAL, INCLUDING PAYMENT OF REVIEW FEES AT THE PLANNING AND COMMUNITY DEVELOPMENT DIRECTORS DISCRETION.

JENNIFER IRVINE, P.E. — DATE

COUNTY ENGINEER/ ECM ADMINISTRATOR

E
THUNSPCROANARPLANPADEANANPR

HR GREEN: ADDRESSED.

This approval block is not required and should be removed as there is already a signature block on the 1st page of this CD set.

EL PASO COUNTY ENGINEER
STORM PLAN DESIGN APPROVAL

PROJECT NUMBER:

WORK ORDER NUMBER:

SHEET ____ OF ____

APPROVAL EXPIRES ONE (1) YEAR FROM THE DATE ABOVE AND RESUBMITTAL OF THESE PLANS FOR REVIEW AND APPROVAL IS REQUIRED IF CONSTRUCTION DOES NOT BEGIN DURING THIS PERIOD.

NOT FOR CONSTRUCTION

PCD FILE NO.: SF2214

DRAWN BY: CBM	JOB DATE: 8/31/2022	BAR IS ONE INCH ON OFFICIAL DRAWINGS. 0 1" IF NOT ONE INCH, ADJUST SCALE ACCORDINGLY.	
APPROVED: KMH	JOB NUMBER: 200541		
CAD DATE: 8/31/2022			
CAD FILE: J:\2020\200541\CAD\Dwgs\C\CD\El _Paso_Co\Storm			

NO.	DATE	BY	REVISION DESCRIPTION

HRGreen
HR GREEN - COLORADO SPRINGS
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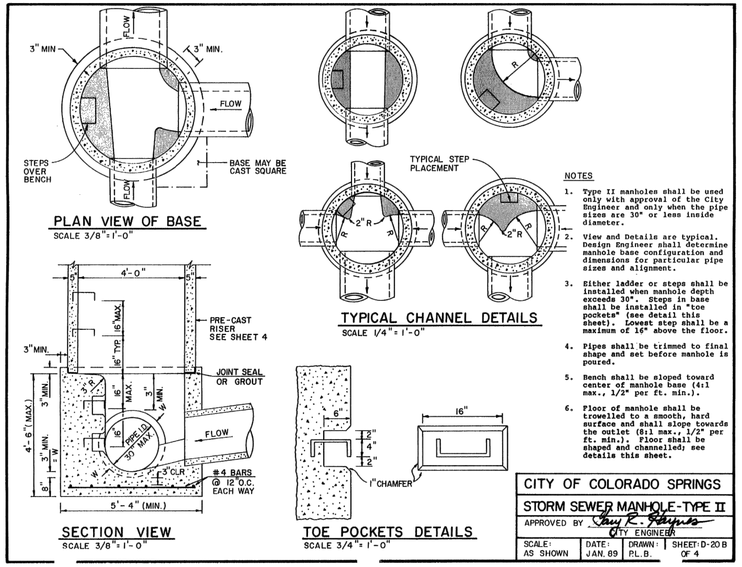
THE COTTAGES AT MESA RIDGE
GOODWIN KNIGHT
EL PASO COUNTY, COLORADO

GOODWIN KNIGHT

EL PASO COUNTY CONSTRUCTION DOCUMENTS
STORM SEWER PLAN AND PROFILE

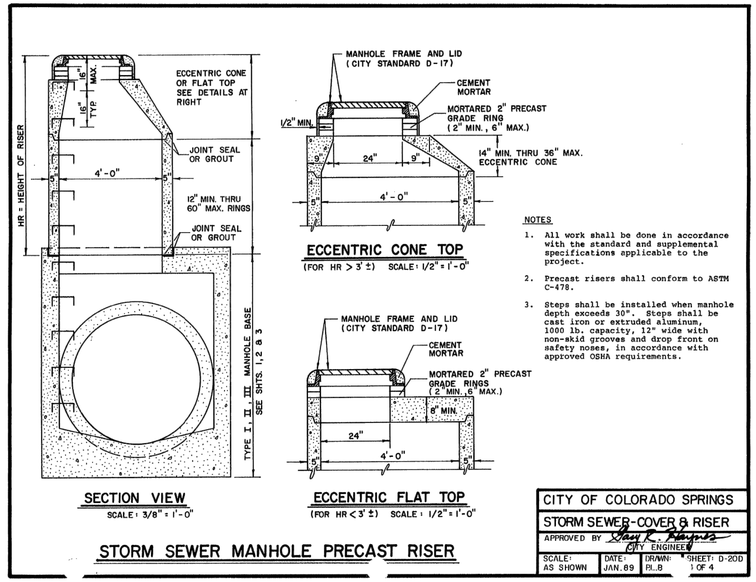
SHEET STM 27



NOTES

1. Type II manholes shall be used only with approval of the City Engineer and only when the pipe sizes are 30" or less inside diameter.
2. View and Details are typical. Design Engineer shall determine manhole base configuration and dimensions for particular pipe sizes and alignment.
3. Either ladder or steps shall be installed when manhole depth exceeds 30". Steps in base shall be installed in "toe pockets" (see detail this sheet). Lowest step shall be a maximum of 16" above the floor.
4. Pipes shall be trimmed to final shape and set before manhole is poured.
5. Bench shall be sloped toward center of manhole base (4:1 max., 1/2" per ft. min.).
6. Floor of manhole shall be troweled to a smooth, hard surface and shall slope towards the outlet (8:1 max., 1/2" per ft. min.). Floor shall be shaped and channeled; see details this sheet.

CITY OF COLORADO SPRINGS			
STORM SEWER MANHOLE-TYPE II			
APPROVED BY Gary R. Haynes CITY ENGINEER			
SCALE: AS SHOWN	DATE: JAN. 89	DRAWN: PL.B.	SHEET D-20B OF 4

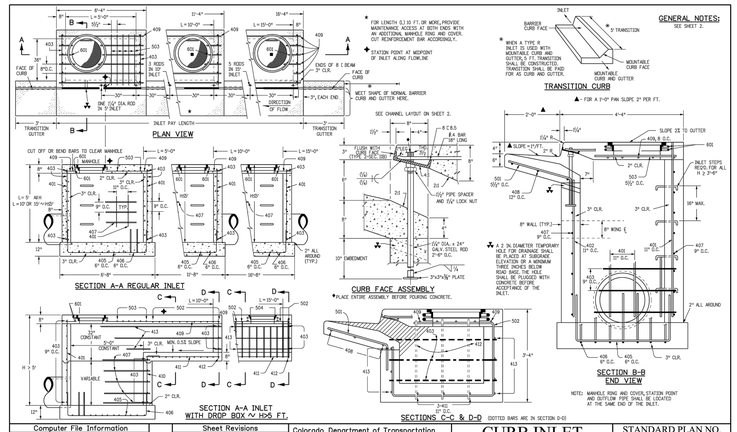


NOTES

1. All work shall be done in accordance with the standard and supplemental specifications applicable to the project.
2. Precast risers shall conform to ASTM C-478.
3. Steps shall be installed when manhole depth exceeds 30". Steps shall be cast iron or extruded aluminum, 1000 lb. capacity, 12" wide with non-skid grooves and drop front on safety noses, in accordance with approved OSHA requirements.

STORM SEWER MANHOLE PRECAST RISER

CITY OF COLORADO SPRINGS			
STORM SEWER-COVER & RISER			
APPROVED BY Gary R. Haynes CITY ENGINEER			
SCALE: AS SHOWN	DATE: JAN. 89	DRAWN: PL.B	SHEET D-20D 1 OF 4



Computer File Information		Sheet Revisions		
Creation Date: 07/31/19		Date:	Comments	
Designer Initials: JBK				
Last Modification Date: 07/31/19				
Detailer Initials: LTA				
CAD Ver.: MicroStation V8 Scale: Not to Scale Units: English				

Colorado Department of Transportation
2829 West Howard Place
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Denver, CO 80204
Phone: 303-757-9023 FAX: 303-757-9868
Project Development Branch JBK

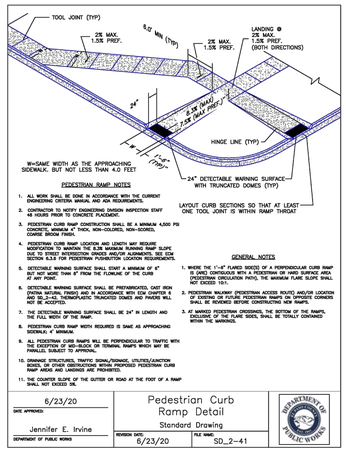
CURB INLET TYPE R

STANDARD PLAN NO. M-604-12
Standard Sheet No. 1 of 2

Issued by the Project Development Branch: July 31, 2019

Project Sheet Number:

6/22/22, 4:35 PM El Paso County, CO Engineering Criteria Manual



W=SAME WIDTH AS THE APPROACHING SIDEWALK, BUT NOT LESS THAN 4.0 FEET

PEDESTRIAN RAMP NOTES

1. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE CURRENT ENGINEERING CRITERIA MANUAL AND ADA REQUIREMENTS.
2. CONTRACTOR TO NOTIFY ENGINEERING DIVISION INSPECTION STAFF 48 HOURS PRIOR TO CONCRETE PLACEMENT.
3. PEDESTRIAN CURB RAMP CONSTRUCTION SHALL BE A MINIMUM 4,500 PSI CONCRETE, MINIMUM 4" THICK, NON-COLORED, NON-SCORED, COARSE BROOM FINISH.
4. PEDESTRIAN CURB RAMP LOCATION AND LENGTH MAY REQUIRE MODIFICATION TO MAINTAIN THE 8.3% MAXIMUM RUNNING RAMP SLOPE DUE TO STREET INTERSECTION GRADES AND/OR ALIGNMENTS. SEE ECM SECTION 6.3.8 FOR PEDESTRIAN PLACEMENT LOCATION REQUIREMENTS.
5. DETECTABLE WARNING SURFACE SHALL START A MINIMUM OF 6" BUT NOT MORE THAN 8" FROM THE FLOWLINE OF THE CURB AT ANY POINT.
6. DETECTABLE WARNING SURFACE SHALL BE PREFABRICATED, CAST IRON (PATINA NATURAL FINISH) AND IN ACCORDANCE WITH ECM CHAPTER 6 SECTION 6.3.8. PREFABRICATE TRUNCATED DOMES AND PAVERS WILL NOT BE ACCEPTED.
7. THE DETECTABLE WARNING SURFACE SHALL BE 24" IN LENGTH AND THE FULL WIDTH OF THE RAMP.
8. PEDESTRIAN CURB RAMP WIDTH REQUIRED IS SAME AS APPROACHING SIDEWALK 4' MINIMUM
9. ALL PEDESTRIAN CURB RAMPS WILL BE PERPENDICULAR TO TRAFFIC WITH THE EXCEPTION OF MID-BLOCK OR TERMINAL RAMPS WHICH MAY BE PARALLEL SUBJECT TO APPROVAL.
10. DRAINAGE STRUCTURES, TRAFFIC SIGNAL/SIGNAGE, UTILITIES/JUNCTION BOXES, AND OTHER OBSTACLES NOT ALLOWED WITHIN PEDESTRIAN CURB RAMP AREAS AND LANDINGS ARE PROHIBITED.
11. THE COUNTER SLOPE OF THE GUTTER OR ROAD AT THE FOOT OF A RAMP SHALL NOT EXCEED 5%.

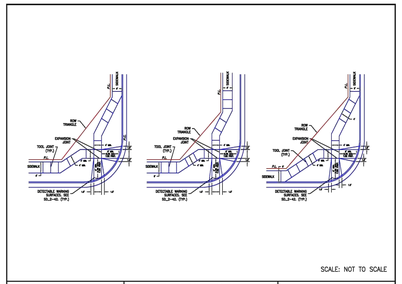
GENERAL NOTES

1. WHERE THE 1'-4" FLARED SIDE(S) OF A PERPENDICULAR CURB RAMP IS (ARE) CONTIGUOUS WITH A PEDESTRIAN OR HARD SURFACE AREA (PEDESTRIAN CIRCULATION PATH), THE MAXIMUM FLARE SLOPE SHALL NOT EXCEED 10%.
2. PEDESTRIAN WALKWAY (PEDESTRIAN ACCESS ROUTE) AND/OR LOCATION OF CURB RAMPS MAY VARY TO ACCOMMODATE ROUTES WHERE CURBS SHALL BE REVIEWED BEFORE CONSTRUCTING NEW RAMPS.
3. AT MARKED PEDESTRIAN CROSSINGS, THE BOTTOM OF THE RAMPS, EXCLUDING OF THE FLARE SIDES, SHALL BE TOTALLY CONTAINED WITHIN THE MARKINGS.

6/23/20 DATE APPROVED: Jennifer E. Irvine DEPARTMENT OF PUBLIC WORKS	Pedestrian Curb Ramp Detail Standard Drawing	
	REVISION DATE: 6/23/20	FILE NAME: SD_2-41

(Res. No. 20-222, 6-23-20)

6/22/22, 4:35 PM El Paso County, CO Engineering Criteria Manual



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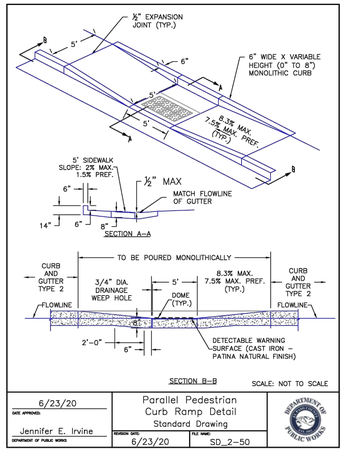
(Res. No. 20-222, 6-23-20)

6/22/22, 4:35 PM El Paso County, CO Engineering Criteria Manual



6/23/20 DATE APPROVED: Jennifer E. Irvine DEPARTMENT OF PUBLIC WORKS	Parallel Pedestrian Curb Ramp Detail Standard Drawing	
	REVISION DATE: 6/23/20	FILE NAME: SD_2-50

(Res. No. 20-222, 6-23-20)

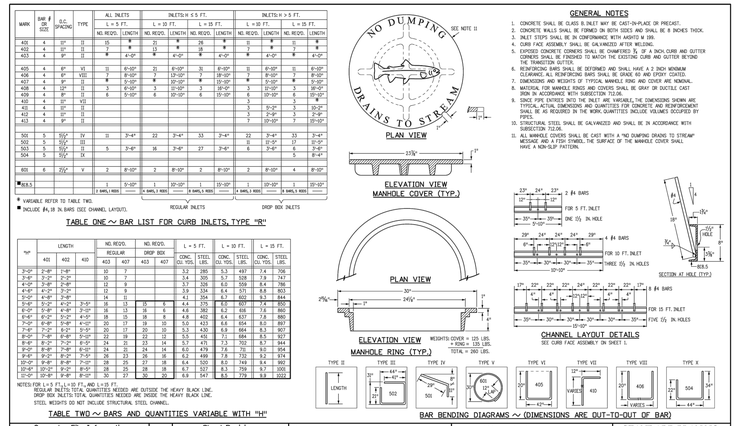


TABLE ONE ~ BAR LIST FOR CURB INLETS, TYPE "R"

TABLE TWO ~ BARS AND QUANTITIES VARIABLE WITH "H"

Computer File Information		Sheet Revisions		
Creation Date: 07/31/19		Date:	Comments	
Designer Initials: JBK				
Last Modification Date: 07/31/19				
Detailer Initials: LTA				
CAD Ver.: MicroStation V8 Scale: Not to Scale Units: English				

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Project Development Branch JBK

CURB INLET TYPE R

STANDARD PLAN NO. M-604-12
Standard Sheet No. 2 of 2

Issued by the Project Development Branch: July 31, 2019

Project Sheet Number:

NOT FOR CONSTRUCTION

PCD FILNE NO.: SF2214

DRAWN BY: CBM	JOB DATE: 8/31/2022	BAR IS ONE INCH ON OFFICIAL DRAWINGS. 0 1" IF NOT ONE INCH, ADJUST SCALE ACCORDINGLY.
APPROVED: KMH	JOB NUMBER: 200541	
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NO.	DATE	BY	REVISION DESCRIPTION

HRGreen

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THE COTTAGES AT MESA RIDGE
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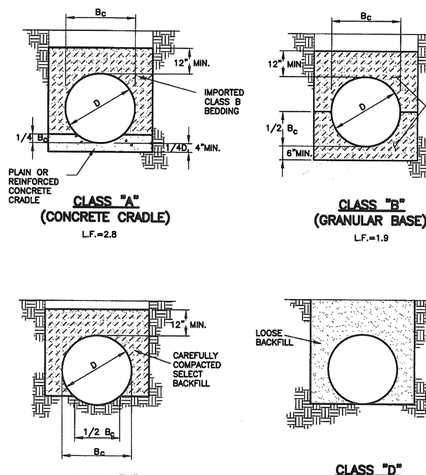
GOODWIN KNIGHT

EL PASO COUNTY CONSTRUCTION DOCUMENTS
DETAILS

SHEET DT 28



NOTES:

1. FOR ROCK OR OTHER INCOMPRESSIBLE MATERIALS, THE TRENCH SHALL BE OVEREXCAVATED A MINUMUM OF 6" AND REFILLED WITH GRANULAR BEDDING MATERIAL AS DEFINED BY CLASS "B" BEDDING.
2. L.F. = LOAD FACTOR
3. CLASS "D" BEDDING WILL NOT BE ACCEPTABLE UNDER ANY CONDITION.
4. MINIMUM DENSITY FOR CAREFULLY COMPACTED SELECT BACKFILL SHALL BE 95% OF STD. PROCTOR DENSITY OR AS SPECIFIED FOR THE TRENCH BACKFILL, WHICHEVER IS GREATER.

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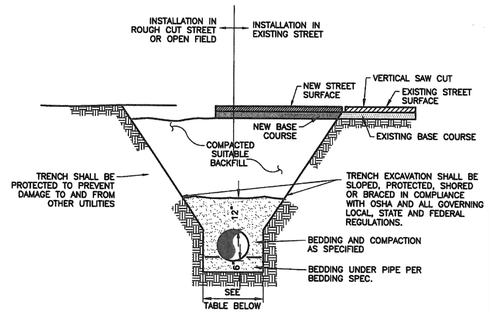
PIPE BEDDING — DWG-01

FSD FOUNTAIN SANITATION DISTRICT | DRAWN: MAM | DATE: MARCH 2000 | SCALE: NONE | REVISED: 2-2003 = CLASS B GRAN. MATERIAL | REVISED: | REVISED:



BOTTOM OF TRENCH WIDTH		
PIPE DIAMETER	MINIMUM WIDTH	MAXIMUM WIDTH
4"	1'-5"	3'-9"
6"	1'-7"	3'-11"
8"	1'-9"	4'-1"
12"	2'-1"	4'-5"
15"	2'-6"	4'-9"
18"	2'-10"	5'-2"
24"	3'-2"	5'-6"

ALL PIPE EMBEDMENT SHALL BE IMPORTED CLASS B BEDDING UNLESS OTHERWISE DIRECTED.

AN OVER EXCAVATED TRENCH SHALL BE REFILLED AND THOROUGHLY COMPACTED UNDER THE DIRECTION OF THE FOUNTAIN SANITATION DISTRICT.

UNDER NO CIRCUMSTANCES WILL PIPE BE LAID IN A PROPOSED FILL AREA PRIOR TO IT BEING COMPLETELY FILLED. THE FILL WILL BE PLACED FIRST TO PROPOSED GRADE AND COMPACTED AS REQUIRED. A TRENCH THEN WILL BE EXCAVATED AND THE PIPE INSTALLED IN THE USUAL MANNER.

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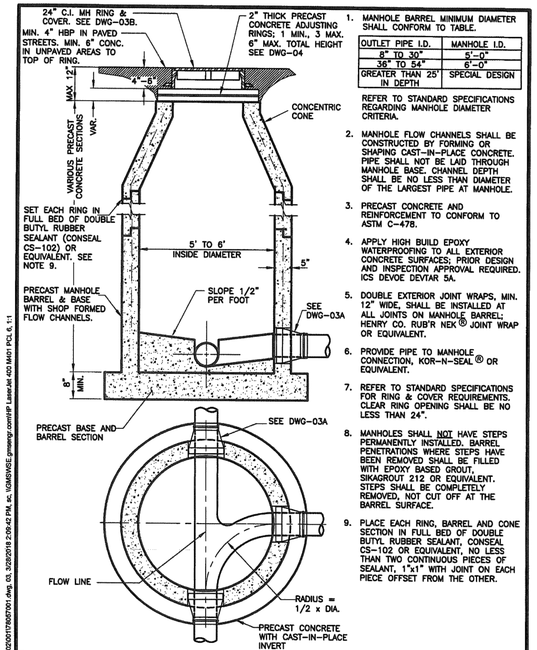
TYPICAL TRENCH CROSS SECTION — DWG-02

FSD FOUNTAIN SANITATION DISTRICT | DRAWN: MAM | DATE: MARCH 2000 | SCALE: NONE | REVISED: 3-2003 = BEDDING DEPTH | REVISED: | REVISED:



1. MANHOLE BARREL MINIMUM DIAMETER SHALL CONFORM TO TABLE.

OUTLET PIPE I.D.	MANHOLE I.D.
8" TO 30"	5'-0"
36" TO 54"	6'-0"
GREATER THAN 25' IN DEPTH	SPECIAL DESIGN

REFER TO STANDARD SPECIFICATIONS REGARDING MANHOLE DIAMETER CRITERIA.

2. MANHOLE FLOW CHANNELS SHALL BE CONSTRUCTED BY FORMING OR SHAPING CAST-IN-PLACE CONCRETE. PIPE SHALL NOT BE LAID THROUGH MANHOLE BASE. CHANNEL DEPTH SHALL BE NO LESS THAN DIAMETER OF THE LARGEST PIPE AT MANHOLE.
3. PRECAST CONCRETE AND REINFORCEMENT TO CONFORM TO ASTM C-478.
4. APPLY HIGH BUILD EPOXY WATERPROOFING TO ALL EXTERIOR CONCRETE SURFACES; PRIOR DESIGN AND INSPECTION APPROVAL REQUIRED. ICS DEVOE DEVTAR 5A.
5. DOUBLE EXTERIOR JOINT WRAPS, MIN. 12" WIDE, SHALL BE INSTALLED AT ALL JOINTS ON MANHOLE BARREL; HENRY CO. RUB'R NEK® JOINT WRAP OR EQUIVALENT.
6. PROVIDE PIPE TO MANHOLE CONNECTION, KOR-N-SEAL® OR EQUIVALENT.
7. REFER TO STANDARD SPECIFICATIONS FOR RING & COVER REQUIREMENTS. CLEAR RING OPENING SHALL BE NO LESS THAN 24".
8. MANHOLES SHALL NOT HAVE STEPS PERMANENTLY INSTALLED. BARREL PENETRATIONS WHERE STEPS HAVE BEEN REMOVED SHALL BE FILLED WITH EPOXY BASED GROUT, SIKAGROUT 212 OR EQUIVALENT. STEPS SHALL BE COMPLETELY REMOVED, NOT CUT OFF AT THE BARREL SURFACE.
9. PLACE EACH RING, BARREL AND CONE SECTION IN FULL BED OF DOUBLE BUTYL RUBBER SEALANT, CONSEAL CS-102 OR EQUIVALENT, NO LESS THAN TWO CONTINUOUS PIECES OF SEALANT, 1"x1" WITH JOINT ON EACH PIECE OFFSET FROM THE OTHER.

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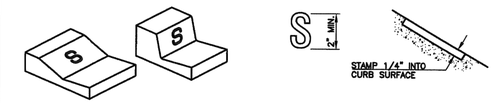
PRECAST CONCRETE MANHOLE — DWG-03

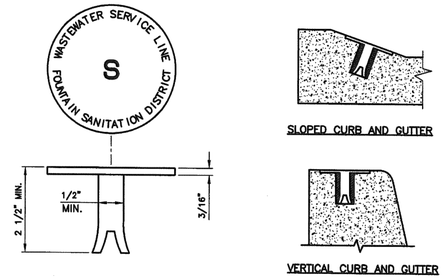
FSD FOUNTAIN SANITATION DISTRICT | DRAWN: SKC | DATE: MARCH 2000 | SCALE: NONE | REVISED: 3-2003 = STEPS AND MH DIAMETER | REVISED: 6-2017: PRECAST BASE, HMA @ RING & MH DIA. | REVISED: 3-2018: CONE, DIAMETERS, WATERPROOFING

MARKING CURBS ABOVE SERVICE LINES

OPTION 1 – STAMP FACE OF CURB WITH 'S' FOR WASTEWATER SERVICE LINE WHILE CONCRETE IS PLASTIC



OPTION 2 – DRILL AND EPOXY A BRONZE MARKER INTO FACE OF CURB FOR SLOPED CURB, OR HEAD OF CURB FOR VERTICAL CURB, ABOVE THE LINE LOCATION AFTER CONCRETE HAS CURED



NOTES:

1. IF THE CURB IS NOT STAMPED WHILE THE CONCRETE IS PLASTIC THEN OPTION 2 MUST BE USED.
2. STAINING OR GRINDING OF A CONCRETE SURFACE TO INDICATE SERVICE LINE LOCATION IS NOT PERMITTED.
3. USE MANUFACTURER'S RECOMMENDED EPOXY OR ANCHORING CEMENT TO AFFIX MARKERS INTO CONCRETE.
4. USE COUNTERSINK DRILL-BIT TO ENSURE TOP OF BRONZE MARKER IS FLUSH WITH CONCRETE SURFACE.

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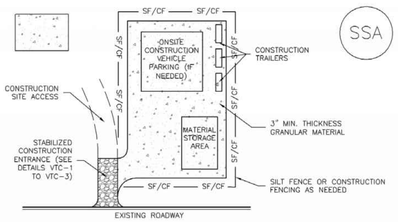
MARKING CURBS ABOVE SERVICE LINES — DWG-11B

FSD FOUNTAIN SANITATION DISTRICT | DRAWN: SKC | DATE: APRIL 2018 | SCALE: NONE | REVISED: | REVISED: | REVISED:

Stabilized Staging Area (SSA) — SM-6



SSA–1. STABILIZED STAGING AREA

STABILIZED STAGING AREA INSTALLATION NOTES

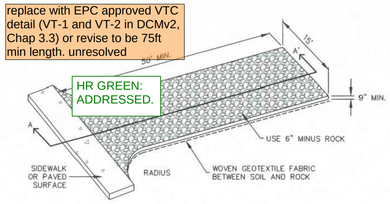
1. SEE PLAN VIEW FOR
   –LOCATION OF STAGING AREA(S).
   –CONTRACTOR MAY ADJUST LOCATION AND SIZE OF STAGING AREA WITH APPROVAL FROM THE LOCAL JURISDICTION.
2. STABILIZED STAGING AREA SHOULD BE APPROPRIATE FOR THE NEEDS OF THE SITE. OVERSIZING RESULTS IN A LARGER AREA TO STABILIZE FOLLOWING CONSTRUCTION.
3. STAGING AREA SHALL BE STABILIZED PRIOR TO OTHER OPERATIONS ON THE SITE.
4. THE STABILIZED STAGING AREA SHALL CONSIST OF A MINIMUM 3" THICK GRANULAR MATERIAL.
5. UNLESS OTHERWISE SPECIFIED BY LOCAL JURISDICTION, ROCK SHALL CONSIST OF DOT SECT. #703, AASHTO #3 COARSE AGGREGATE OR 6" (MINUS) ROCK.
6. ADDITIONAL PERIMETER BMPs MAY BE REQUIRED INCLUDING BUT NOT LIMITED TO SILT FENCE AND CONSTRUCTION FENCING.

STABILIZED STAGING AREA MAINTENANCE NOTES

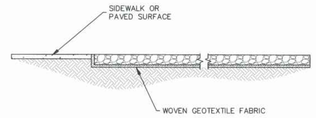
1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
4. ROCK SHALL BE REAPPLIED OR REGRADED AS NECESSARY IF RUTTING OCCURS OR UNDERLYING SUBGRADE BECOMES EXPOSED.

replace with EPC approved VTC detail (VT-1 and VT-2 in DCMv2, Chap 3.3) or revise to be 75ft min length. unresolved

HR GREEN: ADDRESSED.



AGGREGATE VEHICLE TRACKING CONTROL



SECTION A-A'

INSTALLATION NOTES

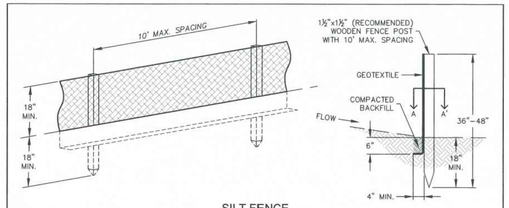
1. A STABILIZED CONSTRUCTION ENTRANCE/EXIT SHOULD BE LOCATED AT ALL POINTS WHERE VEHICLES EXIT THE CONSTRUCTION SITE TO ADJACENT ROADWAY.
2. STABILIZED CONSTRUCTION ENTRANCE/EXITS SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES.
3. RADIUS MUST BE ADEQUATE FOR INTENDED CONSTRUCTION VEHICLE TURNING.
4. ROCK SHOULD CONSIST OF 6" MINUS ROCK.
5. INSTALL CONSTRUCTION FENCE ON BOTH SIDES OF VEHICLE TRACKING CONTROL PAD WHEN NEEDED OR REQUIRED BY INSPECTOR.

MAINTENANCE NOTES

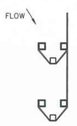
1. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN CONTROL MEASURES IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
2. SEDIMENT TRACKED ONTO THE ADJACENT ROAD SHALL BE REMOVED DAILY, BY SWEEPING OR SHOVELING, AND NEVER WASHED DOWN STORM DRAINS.
3. ROUGHEN, REPLACE AND/OR ADD ROCK AS NEEDED TO MAINTAIN CONSISTENT DEPTH AND TO PREVENT SEDIMENT TRACKING ONTO ADJACENT STREET.
4. PERMANENTLY STABILIZE AREA AFTER VEHICLE TRACKING CONTROL IS REMOVED.

VTC

STORMWATER ENTERPRISE | VEHICLE TRACKING CONTROL | APPROVED: | ENGINEER MANAGER | ISSUED: 10/7/19 | REVISED: 8/19/2020 | DRAWING NO. 900-VTC



SILT FENCE



J-HOOK INSTALLATION

SECTION A-A'

INSTALLATION NOTES

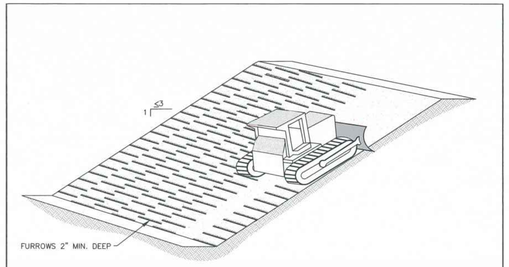
1. SILT FENCE MUST BE PLACED ON A FLAT SURFACE 2'–5' AWAY FROM TOE OF THE SLOPE TO ALLOW FOR PONDING AND DEPOSITION.
2. COMPACT THE TRENCH USING A JUMPING JACK OR WHEEL ROLLING TO THE POINT THAT THE FENCE RESISTS BEING PULLED OUT OF THE GROUND BY HAND.
3. SILT FENCE SHALL BE TAUT WITH NO SAGS AFTER IT HAS BEEN ANCHORED.
4. FABRIC SHALL BE ATTACHED TO POSTS WITH 1" HEAVY DUTY STAPLES OR 1" NAILS. THESE SHOULD BE PLACED VERTICALLY DOWN THE POST, 3" APART.
5. THE PREFERRED INSTALLATION METHOD USES A TRENCHER OR SILT FENCE INSTALLATION DEVICE.
6. INSTALL SILT FENCE ALONG THE CONTOUR OF THE SLOPES OR IN A MANNER TO AVOID CREATING CONCENTRATED FLOW (SUCH AS A "J-HOOK" INSTALLATION).

MAINTENANCE NOTES

1. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN CONTROL MEASURES IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
2. ACCUMULATED SEDIMENT MUST BE REMOVED WHEN THE HEIGHT REACHES ½ OF THE DESIGN HEIGHT OF THE SILT FENCE.
3. SILT FENCE MUST REMAIN UNTIL THE UPSTREAM DISTURBANCE AREA IS STABILIZED.
4. PERMANENTLY STABILIZE AREA AFTER SILT FENCE IS REMOVED.

SF

STORMWATER ENTERPRISE | SILT FENCE | APPROVED: | ENGINEER MANAGER | ISSUED: 10/7/19 | REVISED: 8/19/2020 | DRAWING NO. 900-SF



SLOPE TRACKING

INSTALLATION NOTES

1. SLOPE TRACKING MAY BE USED ON SLOPES 3:1 OR STEEPER.
2. TRACKING GROOVES SHALL BE PERPENDICULAR TO THE SLOPE.
3. SLOPE TRACKING SHALL NOT BE USED ON EXTREMELY SANDY OR ROCKY SOILS.

MAINTENANCE NOTES

1. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN CONTROL MEASURES IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
2. VEHICLES AND EQUIPMENT SHALL NOT BE DRIVEN OVER AREAS THAT HAVE BEEN SLOPE TRACKED.

ST

STORMWATER ENTERPRISE | SLOPE TRACKING | APPROVED: | ENGINEER MANAGER | ISSUED: 10/7/19 | REVISED: 8/19/2020 | DRAWING NO. 900-ST

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GOODWIN KNIGHT

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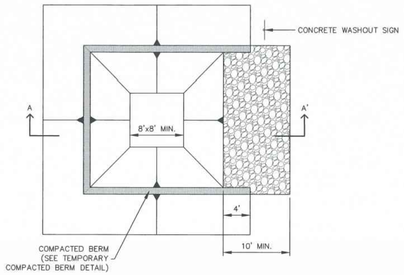
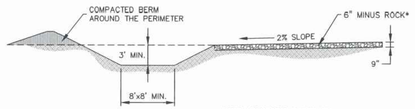
DETAILS

SHEET DT



CONCRETE WASHOUT AREA PLAN



SECTION A-A'

*ROCK REQUIRED BASED ON SITE CONDITIONS AT THE DISCRETION OF THE GEC INSPECTOR

CWA

STORMWATER ENTERPRISE

CONCRETE WASHOUT AREA

APPROVED: CMENT MANAGER

ISSUED:	REVISED:	DRAWING NO.
10/7/19	8/19/2020	900-CWA-1

INSTALLATION NOTES

1. SEE PLAN VIEW FOR:
   -LOCATION OF CONCRETE WASHOUT AREA
2. LOCATE AT LEAST 50' AWAY FROM STATE WATERS MEASURED HORIZONTALLY.
3. AN IMPERMEABLE LINER (16 MIL MINIMUM THICKNESS) IS REQUIRED IF CONCRETE WASH AREA IS LOCATED WITHIN 400' OF STATE WATERS OR 1000' OF WELLS OR DRINKING WATER SOURCES.
4. DO NOT LOCATE IN AREAS WHERE SHALLOW GROUNDWATER MAY BE PRESENT.
5. THE CONCRETE WASH AREA SHALL BE INSTALLED PRIOR TO CONCRETE PLACEMENT ON SITE.
6. CONCRETE WASH AREA SHALL INCLUDE A FLAT SUBSURFACE PIT THAT IS AT LEAST 8' BY 8'.
7. BERM SURROUNDING SIDES AND BACK OF CONCRETE WASH AREA SHALL HAVE A MINIMUM HEIGHT OF 2 FEET.
8. CONCRETE WASH AREA ENTRANCE SHALL BE SLOPED 2% TOWARDS THE CONCRETE WASH AREA.
9. SIGNS SHALL BE PLACED AT THE CONCRETE WASH AREA.
10. USE EXCAVATED MATERIAL FOR PERIMETER BERM CONSTRUCTION.

MAINTENANCE NOTES

1. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN CONTROL MEASURES IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
2. THE CONCRETE WASH AREA SHALL BE REPAIRED, CLEANED, OR ENLARGED AS NECESSARY TO MAINTAIN CAPACITY FOR CONCRETE WASTE. CONCRETE MATERIALS ACCUMULATED IN THE PIT SHALL BE REMOVED ONCE THE MATERIALS HAVE REACHED A DEPTH OF ⅔ THE HEIGHT OF THE CONCRETE WASH AREA.
3. CONCRETE WASHOUT WATER, WASTED PIECES OF CONCRETE, AND ALL OTHER DEBRIS IN THE SUBSURFACE PIT SHALL BE TRANSPORTED FROM THE JOB SITE IN A WATER-TIGHT CONTAINER AND DISPOSED OF PROPERLY.
4. THE CONCRETE WASH AREA SHALL REMAIN IN PLACE UNTIL ALL CONCRETE FOR THE PROJECT IS PLACED.
5. PERMANENTLY STABILIZE AREA AFTER CONCRETE WASH AREA IS REMOVED.

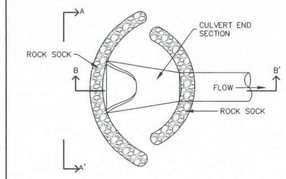
CWA

STORMWATER ENTERPRISE

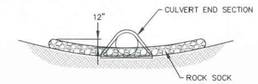
CONCRETE WASHOUT AREA

APPROVED: CMENT MANAGER

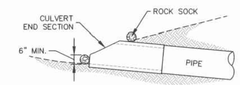
ISSUED:	REVISED:	DRAWING NO.
10/7/19	8/19/2020	900-CWA-2



CULVERT INLET PROTECTION PLAN



SECTION A-A'



SECTION B-B'

INSTALLATION NOTES

1. SEE ROCK SOCK DETAIL.

MAINTENANCE NOTES

1. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN CONTROL MEASURES IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
2. ACCUMULATED SEDIMENT UPSTREAM OF THE CULVERT SHALL BE REMOVED WHEN THE SEDIMENT DEPTH IS ½ HEIGHT OF THE ROCK SOCK.
3. CULVERT INLET PROTECTION SHALL REMAIN UNTIL THE UPSTREAM AREA IS PERMANENTLY STABILIZED.

CIP

STORMWATER ENTERPRISE

CULVERT INLET PROTECTION

APPROVED: CMENT MANAGER

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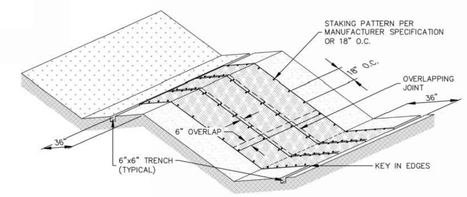
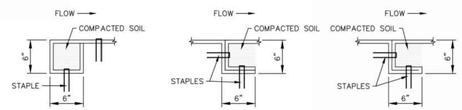


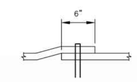
EROSION CONTROL BLANKET



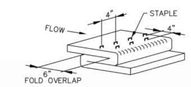
PERIMETER ANCHOR TRENCH

JOINT ANCHOR TRENCH

INTERMEDIATE CHECK SLOT



OVERLAPPING JOINT



STAPLE CHECK

TO BE USED ON SLOPE EVERY 15 FEET

ECB

STORMWATER ENTERPRISE

EROSION CONTROL BLANKET

APPROVED: CMENT MANAGER

ISSUED:	REVISED:	DRAWING NO.
10/7/19	8/19/2020	900-ECB-1

INSTALLATION NOTES

1. 100% NATURAL AND BIODEGRADABLE MATERIALS ARE REQUIRED FOR EROSION CONTROL BLANKETS. TRM PRODUCTS MAY ME USED WHERE APPROPRIATE AS DESIGNATED BY THE ENGINEER.
2. IN AREAS WHERE EROSION CONTROL BLANKETS ARE SHOWN ON THE PLANS, THE PERMITTEE SHALL PLACE TOPSOIL AND PERFORM FINAL GRADING, SURFACE PREPARATION, AND SEEDING AND MULCHING. SUBGRADE SHALL BE SMOOTH AND MOIST PRIOR TO EROSION CONTROL BLANKET INSTALLATION, AND THE EROSION CONTROL BLANKET SHALL BE IN FULL CONTACT WITH THE SUBGRADE. NO GAPS OR VOIDS SHALL EXIST UNDER THE BLANKET.
3. PERIMETER ANCHOR TRENCH SHALL BE USED ALONG THE OUTSIDE PERIMETER OF ALL BLANKET AREAS.
4. JOINT ANCHOR TRENCH SHALL BE USED TO JOIN ROLLS OF EROSION CONTROL BLANKETS TOGETHER (LONGITUDINALLY AND TRANSVERSELY) FOR ALL EROSION CONTROL BLANKETS.
5. INTERMEDIATE CHECK SLOT OR STAPLE CHECK SHALL BE INSTALLED EVERY 15' DOWN SLOPES. IN DRAINAGEWAYS, INSTALL CHECK SLOTS EVERY 25' PERPENDICULAR TO FLOW DIRECTION.
6. OVERLAPPING JOINT DETAIL SHALL BE USED TO JOIN ROLLS OF EROSION CONTROL BLANKETS TOGETHER FOR EROSION CONTROL BLANKETS ON SLOPES.
7. MATERIAL SPECIFICATIONS OF EROSION CONTROL BLANKETS SHALL CONFORM TO TABLE ECB-1.
8. ANY AREAS OF SEEDING AND MULCHING DISTURBED IN THE PROCESS OF INSTALLING EROSION CONTROL BLANKETS SHALL BE RESEEDED AND MULCHED.
9. STRAW EROSION CONTROL BLANKETS SHALL NOT BE USED WITHIN STREAMS AND DRAINAGE CHANNELS.
10. COMPACT ALL TRENCHES.

MAINTENANCE NOTES

1. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN CONTROL MEASURES IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
2. EROSION CONTROL BLANKETS SHALL BE LEFT IN PLACE TO EVENTUALLY BIODEGRADE. TRM MUST BE REMOVED AT THE DISCRETION OF THE GEC INSPECTOR.
3. ANY EROSION CONTROL BLANKET PULLED OUT, TORN, OR OTHERWISE DAMAGED SHALL BE REPAIRED OR REINSTALLED. ANY SUBGRADE AREAS BELOW GEOTEXTILE THAT HAVE ERODED TO CREATE A VOID UNDER THE BLANKET, OR THAT REMAIN DEVOID OF GRASS SHALL BE REPAIRED, RESEEDED AND MULCHED AND THE EROSION CONTROL BLANKET REINSTALLED.

TABLE ECB-1, EROSION CONTROL BLANKET MATERIAL SPECIFICATIONS

TYPE	COCONUT CONTENT	STRAW CONTENT	EXCELSIOR CONTENT	RECOMMENDED NETTING
STRAW	–	100%	–	DOUBLE/ NATURAL
STRAW-COCONUT	30% MIN.	70% MAX.	–	DOUBLE/ NATURAL
COCONUT	100%	–	–	DOUBLE/ NATURAL
EXCELSIOR	–	–	100%	DOUBLE/ NATURAL

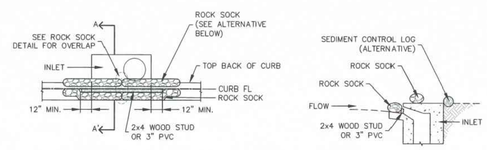
ECB

STORMWATER ENTERPRISE

EROSION CONTROL BLANKET

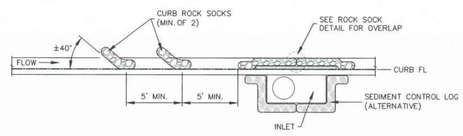
APPROVED: CMENT MANAGER

ISSUED:	REVISED:	DRAWING NO.
10/7/19	8/19/2020	900-ECB-2



CURB INLET PROTECTION PLAN

SECTION A-A'



CURB ROCK SOCKS UPSTREAM OF INLET PROTECTION

INSTALLATION NOTES

1. SEE ROCK SOCK DETAIL FOR INSTALLATION REQUIREMENTS.
2. PLACEMENT OF THE ROCK SOCK SHALL BE APPROXIMATELY 40 DEGREES FROM THE CURB.
3. ROCK SOCKS ARE TO BE FLUSH WITH THE CURB AND SPACED A MINIMUM OF 5' APART.
4. AT LEAST TWO CURB ROCK SOCKS IN SERIES ARE REQUIRED UPSTREAM OF ON-GRADIENT INLETS.
5. ADDITIONAL ROCK SOCKS MAY BE REQUIRED AT GEC INSPECTOR'S DISCRETION.

MAINTENANCE NOTES

1. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN CONTROL MEASURES IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
2. ACCUMULATED SEDIMENT MUST BE REMOVED WHEN THE HEIGHT REACHES ½ OF THE DESIGN DEPTH OF THE INLET BARRIER.
3. ROCK SOCKS MUST REMAIN UNTIL THE UPSTREAM DISTURBANCE AREA IS STABILIZED.
4. PERMANENTLY STABILIZE AREA BEHIND INLET AFTER ROCK SOCKS ARE REMOVED WHEN REMOVAL IS APPROPRIATE.

IP-1

STORMWATER ENTERPRISE

ON-GRADE INLET PROTECTION

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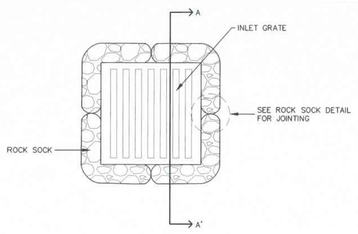
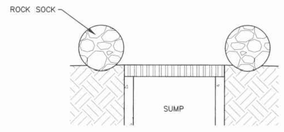


ROCK SOCK SUMP INLET PROTECTION PLAN



SECTION A-A'

INSTALLATION NOTES

1. SEE ROCK SOCK DETAIL FOR INSTALLATION REQUIREMENTS.
2. SEDIMENT CONTROL LOGS MAY BE USED IN PLACE OF ROCK SOCKS IN PERVIOUS AREAS. INSTALL PER SEDIMENT CONTROL LOG DETAIL
3. CONTROL MEASURES MUST BE WRAPPED AROUND INLET AS TIGHTLY AS POSSIBLE.

MAINTENANCE NOTES

1. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN CONTROL MEASURES IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
2. ACCUMULATED SEDIMENT MUST BE REMOVED WHEN THE HEIGHT REACHES ½ OF THE DESIGN DEPTH OF THE INLET BARRIER.
3. ROCK SOCKS MUST REMAIN UNTIL THE UPSTREAM DISTURBANCE AREA IS STABILIZED.
4. PERMANENTLY STABILIZE AREA AROUND INLET AFTER ROCK SOCKS ARE REMOVED WHEN REMOVAL IS APPROPRIATE.

IP-2

STORMWATER ENTERPRISE

SUMP INLET PROTECTION

APPROVED: CMENT MANAGER

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10/7/19	8/19/2020	900-IP-2

SEEDING & MULCHING

ALL SOIL TESTING, SOILS AMENDMENT AND FERTILIZER DOCUMENTATION, AND SEED LOAD AND BAG TICKETS MUST BE ADDED TO THE CSWMP.

SOIL PREPARATION

1. IN AREAS TO BE SEEDED, THE UPPER 6 INCHES OF THE SOIL MUST NOT BE HEAVILY COMPACTED, AND SHOULD BE IN FRIABLE CONDITION. LESS THAN 85% STANDARD PROCTOR DENSITY IS ACCEPTABLE. AREAS OF COMPACTION OR GENERAL CONSTRUCTION ACTIVITY MUST BE SCARIFIED TO A DEPTH OF 6 TO 12 INCHES PRIOR TO SPREADING TOPSOIL TO BREAK UP COMPACTED LAYERS AND PROVIDE A BLENDING ZONE BETWEEN DIFFERENT SOIL LAYERS.
2. AREAS TO BE PLANTED SHALL HAVE AT LEAST 4 INCHES OF TOPSOIL SUITABLE TO SUPPORT PLANT GROWTH.
3. THE CITY RECOMMENDS THAT EXISTING AND/OR IMPORTED TOPSOIL BE TESTED TO IDENTIFY SOIL DEFICIENCIES AND ANY SOIL AMENDMENTS NECESSARY TO ADDRESS THESE DEFICIENCIES. SOIL AMENDMENTS AND/OR FERTILIZERS SHOULD BE ADDED TO CORRECT TOPSOIL DEFICIENCIES BASED ON SOIL TESTING RESULTS.
4. TOPSOIL SHALL BE PROTECTED DURING THE CONSTRUCTION PERIOD TO RETAIN ITS STRUCTURE AVOID COMPACTION, AND TO PREVENT EROSION AND CONTAMINATION. STRIPPED TOPSOIL MUST BE STORED IN AN AREA AWAY FROM MACHINERY AND CONSTRUCTION OPERATIONS, AND CARE MUST BE TAKEN TO PROTECT THE TOPSOIL AS A VALUABLE COMMODITY. TOPSOIL MUST NOT BE STRIPPED DURING UNDESIRABLE WORKING CONDITIONS (E.G. DURING WET WEATHER OR WHEN SOILS ARE SATURATED). TOPSOIL SHALL NOT BE STORED IN SWALES OR IN AREAS WITH POOR DRAINAGE.

SEEDING

1. ALLOWABLE SEED MIXES ARE INCLUDED IN THE CITY OF COLORADO SPRINGS STORMWATER CONSTRUCTION MANUAL. ALTERNATIVE SEED MIXES ARE ACCEPTABLE IF INCLUDED IN AN APPROVED LANDSCAPING PLAN.
2. SEED SHOULD BE DRILL-SEEDED WHENEVER POSSIBLE
   - SEED DEPTH MUST BE ¼ TO ½ INCHES WHEN DRILL-SEEDING IS USED
3. BROADCAST SEEDING OR HYDRO-SEEDING WITH TACKIFIER MAY BE SUBSTITUTED ON SLOPES STEEPER THAN 3:1 OR ON OTHER AREAS NOT PRACTICAL TO DRILL SEED.
   - SEEDING RATES MUST BE DOUBLED FOR BROADCAST SEEDING OR INCREASED BY 50% IF USING A BRILLION DRILL OR HYDRO-SEEDING
   - BROADCAST SEEDING MUST BE LIGHTLY HAND-RAKED INTO THE SOIL

MULCHING

1. MULCHING SHOULD BE COMPLETED AS SOON AS PRACTICABLE AFTER SEEDING, HOWEVER PLANTED AREAS MUST BE MULCHED NO LATER THAN 14 DAYS AFTER PLANTING.
2. MULCHING REQUIREMENTS INCLUDE:
   - HAY OR STRAW MULCH
     - ONLY CERTIFIED WEED-FREE AND CERTIFIED SEED-FREE MULCH MAY BE USED. MULCH MUST BE APPLIED AT 2 TONS/ACRE AND ADEQUATELY SECURED BY CRIMPING AND/OR TACKIFIER.
     - CRIMPING MUST NOT BE USED ON SLOPES GREATER THAN 3:1 AND MULCH FIBERS MUST BE TUCKED INTO THE SOIL TO A DEPTH OF 3 TO 4 INCHES.
     - TACKIFIER MUST BE USED IN PLACE OF CRIMPING ON SLOPES STEEPER THAN 3:1.
   - HYDRAULIC MULCHING
     - HYDRAULIC MULCHING IS AN OPTION ON STEEP SLOPES OR WHERE ACCESS IS LIMITED.
     - IF HYDRO-SEEDING IS USED, MULCHING MUST BE APPLIED AS A SEPARATE, SECOND OPERATION.
     - WOOD CELLULOSE FIBERS MIXED WITH WATER MUST BE APPLIED AT A RATE OF 2,000 TO 2,500 POUNDS/ACRE, AND TACKIFIER MUST BE APPLIED AT A RATE OF 100 POUNDS/ACRE.
   - EROSION CONTROL BLANKET
     - EROSION CONTROL BLANKET MAY BE USED IN PLACE OF TRADITIONAL MULCHING METHODS.

SM

STORMWATER ENTERPRISE

SEEDING & MULCHING

APPROVED: CMENT MANAGER

ISSUED:	REVISED:	DRAWING NO.
10/7/19	8/19/2020	900-SM

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PCD FILNE NO.: SF2214

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THE COTTAGES AT MESA RIDGE
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EL PASO COUNTY, COLORADO

GOODWIN KNIGHT

EL PASO COUNTY CONSTRUCTION DOCUMENTS
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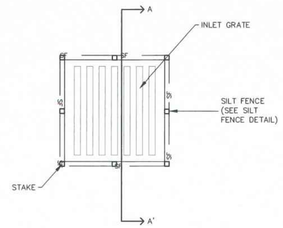
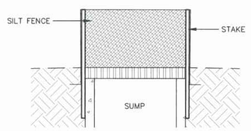


SILT FENCE SUMP INLET PROTECTION PLAN



SECTION A-A'

INSTALLATION NOTES

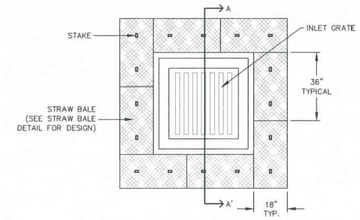
1. SEE SILT FENCE DETAIL FOR INSTALLATION REQUIREMENTS.
2. POSTS SHALL BE PLACED AT EACH CORNER OF THE INLET AND AROUND THE EDGES AT A MAXIMUM SPACING OF THREE FEET.
3. SILT FENCE FABRIC SHOULD HAVE A FLOW RATE IN EXCESS OF 30 GALLONS PER MINUTE PER SQUARE YARD SO AS TO ALLOW SOME WATER FLOW AND NOT DAM THE WATER. STANDARD, LOW-FLOW SILT FENCE FABRIC WILL NOT BE ALLOWED.

MAINTENANCE NOTES

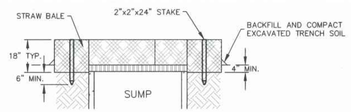
1. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN CONTROL MEASURES IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
2. ACCUMULATED SEDIMENT MUST BE REMOVED WHEN THE HEIGHT REACHES ½ OF THE DESIGN DEPTH OF THE INLET BARRIER.
3. SILT FENCE MUST REMAIN UNTIL THE UPSTREAM DISTURBANCE AREA IS STABILIZED.
4. PERMANENTLY STABILIZE AREA AROUND INLET AFTER SILT FENCE IS REMOVED WHEN REMOVAL IS APPROPRIATE.

IP-3

STORMWATER ENTERPRISE | SUMP INLET PROTECTION
APPROVED: SWENT MANAGER | ISSUED: 10/7/19 | REVISED: 8/19/2020 | DRAWING NO. 900-IP-3



STRAW BALE SUMP INLET PROTECTION PLAN



SECTION A-A'

INSTALLATION NOTES

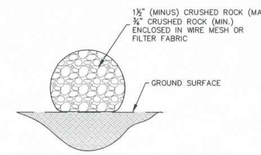
1. BALES SHALL BE PLACED IN A SINGLE ROW AROUND THE INLET WITH THE ENDS OF THE BALES TIGHTLY ABUTTING ONE ANOTHER.
2. STRAW BALES SHALL CONSIST OF CERTIFIED WEED FREE STRAW OR HAY. LOCAL JURISDICTIONS MAY REQUIRE PROOF THAT BALES ARE WEED FREE.
3. STRAW BALES SHALL CONSIST OF APPROXIMATELY 5 CUBIC FEET OF STRAW OR HAY AND WEIGH NOT LESS THAN 35 POUNDS.
4. STRAW BALE DIMENSIONS SHALL BE APPROXIMATELY 36"x18"x18".
5. A UNIFORM ANCHOR TRENCH SHALL BE EXCAVATED TO A DEPTH OF 4". STRAW BALES SHALL BE PACED SO THAT THE BINDING TWINE IS ENCOMPASSING THE VERTICAL SIDES OF THE BALE(S).
6. TWO (2) WOODEN STAKES SHALL BE USED TO HOLD EACH BALE IN PLACE. WOODEN STAKED SHALL BE 2"x2"x24 (MIN.)". WOODEN STAKES SHALL BE DRIVEN A MINIMUM OF 6" INTO THE GROUND.

MAINTENANCE NOTES

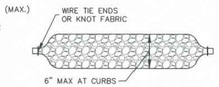
1. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN CONTROL MEASURES IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
2. ACCUMULATED SEDIMENT MUST BE REMOVED WHEN THE HEIGHT REACHES ½ OF THE DESIGN DEPTH OF THE INLET BARRIER.
3. STRAW BALES MUST REMAIN UNTIL THE UPSTREAM DISTURBANCE AREA IS STABILIZED.
4. PERMANENTLY STABILIZE AREA AROUND INLET AFTER STRAW BALES ARE REMOVED WHEN REMOVAL IS APPROPRIATE.
5. STRAW BALES SHALL BE REPLACED IF THEY BECOME HEAVILY SOILED, ROTTEN OR DAMAGED BEYOND REPAIR.

IP-4

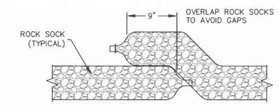
STORMWATER ENTERPRISE | SUMP INLET PROTECTION
APPROVED: SWENT MANAGER | ISSUED: 10/7/19 | REVISED: 8/19/2020 | DRAWING NO. 900-IP-4



ROCK SOCK SECTION



ROCK SOCK PLAN



ROCK SOCK OVERLAP

GRADATION TABLE	
	MASS PERCENT PASSING SQUARE MESH SIEVES
	No. 4
2"	100
1½"	90–100
1"	20–55
¾"	0–15
⅜"	0–5

MATCHES SPECIFICATIONS FOR No. 4 COARSE AGGREGATE FOR CONCRETE PER AASHTO M-43. ALL ROCK SHALL BE FRACTURED FACE, ALL SIDES

INSTALLATION NOTES

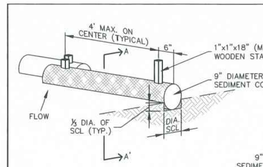
1. CRUSHED ROCK SHALL BE BETWEEN MAX. 1½" (MINUS) IN SIZE WITH A FRACTURED FACE (ALL SIDES) AND SHALL COMPLY WITH GRADATION SHOWN ON THIS SHEET AND MIN. ¾" CRUSHED ROCK.
2. WIRE MESH SHALL HAVE OPENINGS SMALLER THAN THE SMALLEST SIZE ROCK.
3. WIRE MESH SHALL BE SECURED USING 'HOG RINGS' OR WIRE TIES AT 6" CENTERS ALONG ALL JOINTS AND AT 2" CENTERS ON ENDS OF SOCKS.

MAINTENANCE NOTES

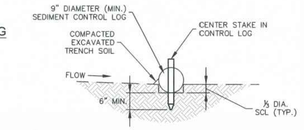
1. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN CONTROL MEASURES IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
2. ROCK SOCKS SHALL BE REPLACED IF THEY BECOME HEAVILY SOILED OR DAMAGED BEYOND REPAIR.
3. ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN THE DEPTH REACHES ½ OF THE HEIGHT OF THE ROCK SOCK.
4. ROCK SOCKS ARE TO REMAIN IN PLACE UNTIL DISTURBED AREA IS STABILIZED.
5. PERMANENTLY STABILIZE AREA AFTER ROCK SOCKS HAVE BEEN REMOVED.

RS

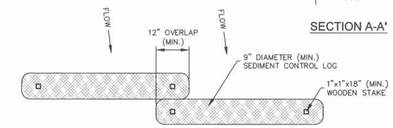
STORMWATER ENTERPRISE | ROCK SOCK
APPROVED: SWENT MANAGER | ISSUED: 10/7/19 | REVISED: 8/19/2020 | DRAWING NO. 900-RS



SEDIMENT CONTROL LOG



SECTION A-A'



SEDIMENT CONTROL LOG JOINTS

INSTALLATION NOTES

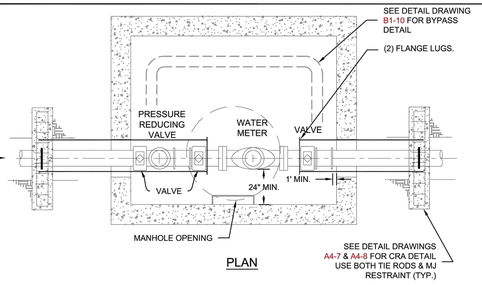
1. ALL SEDIMENT CONTROL LOGS MUST BE EMBEDDED TO ⅓ OF THE HEIGHT OF THE LOG
2. LARGER DIAMETER SEDIMENT CONTROL LOGS NEED TO BE EMBEDDED DEEPER.
3. PLACE SEDIMENT CONTROL LOG AGAINST SIDEWALK OR BACK OF CURB WHEN ADJACENT TO THESE FEATURES.
4. SEDIMENT CONTROL LOGS SHALL CONSIST OF STRAW, COMPOST, EXCELSIOR OR COCONUT FIBER, AND SHALL BR FREE FROM ANY NOXIOUS WEED SEEDS OF DEFECTS INCLUDING RIPS, HOLES' AND OBVIOUS WEAR.
5. IF USING AS SLOPE PROTECTION, INSTALL SEDIMENT CONTROL LOGS ALONG THE CONTOUR.

MAINTENANCE NOTES

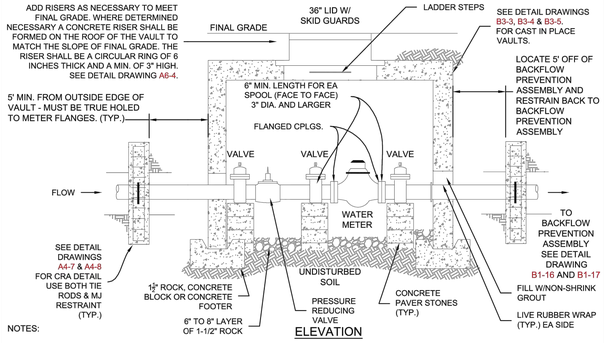
1. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN CONTROL MEASURES IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
2. ACCUMULATED SEDIMENT MUST BE REMOVED WHEN THE HEIGHT REACHES ½ OF THE HEIGHT OF THE SEDIMENT CONTROL LOG.
3. PERMANENTLY STABILIZE AREA AFTER SEDIMENT CONTROL LOGS HAVE BEEN REMOVED.

SCL

STORMWATER ENTERPRISE | SEDIMENT CONTROL LOGS
APPROVED: SWENT MANAGER | ISSUED: 10/7/19 | REVISED: 8/19/2020 | DRAWING NO. 900-SCL



PLAN

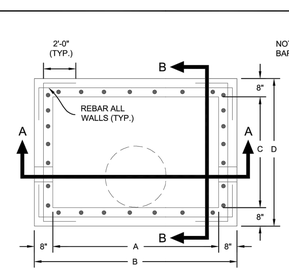


ELEVATION

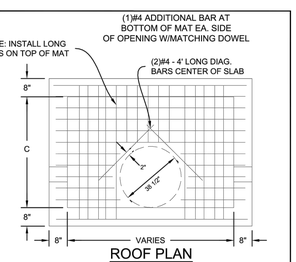
NOTES:

1. REFER TO DETAIL DRAWINGS B1-9 THRU B1-11 FOR METER INSTALLATION REQUIREMENTS AND CLEARANCES.
2. THE METER MUST BE INSTALLED WITH THE CLEARANCE DIMENSIONS AS SHOWN IN DETAIL DRAWING B1-11. ONE SIDE OF THE METER SHALL BE FREE FROM ANY OBSTRUCTION. 3' MINIMUM CLEARANCE IS REQUIRED ABOVE AND IN FRONT OF THE METER.
3. TIE RODS TO BE CATHODICALLY PROTECTED PER DETAIL DRAWING A8-11.
4. PRECAST CONCRETE VAULTS SHALL BE DESIGNED FOR HS-20 TRAFFIC LOADING CONDITIONS AND 300 PSF SURCHARGE LOAD.
5. SEE DETAIL DRAWING B3-5 FOR FOOTER DIMENSIONS AND STRUCTURAL REQUIREMENTS.
6. SEE DETAIL DRAWINGS B3-3 AND B3-5 FOR PRECAST VAULT DIMENSIONS.
4. NO DRAIN VALVES, OUTLETS OR BRANCH LINES SHALL BE LOCATED BEFORE THE APPROVED BACKFLOW PREVENTION ASSEMBLY.
5. BACKFLOW PREVENTION ASSEMBLY MUST BE LOCATED NO MORE THAN 10' FROM THE OUTSIDE EDGE OF VAULT.

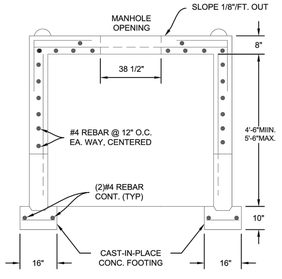
Colorado Springs Utilities — It's how we're all connected | PRE-CAST CONCRETE VAULT FOR 3" THRU 10" METERS W/BYPASS | B3-2 | DATED 03/2019



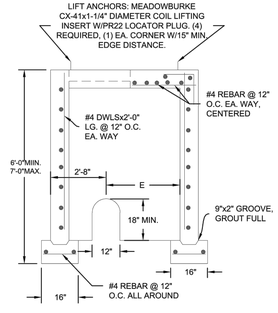
PLAN



ROOF PLAN



SECTION A-A



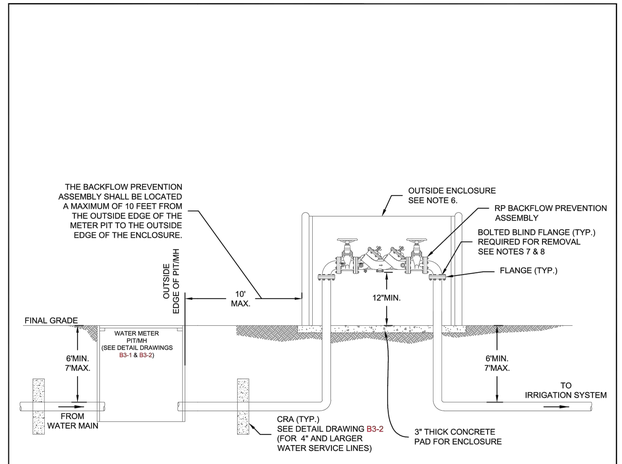
SECTION B-B

METER SIZE	A	B	C	D	E
3" & 4"	10'-0"	11'-4"	5'-0"	6'-4"	3'-8"
6"	11'-0"	12'-4"	5'-0"	6'-4"	3'-8"

PLAN:

CONCRETE VAULT SHALL BE DESIGNED FOR HS-20 TRAFFIC LOADING CONDITIONS AND 300 PSF SURCHARGE LOAD, UNLESS APPROVED OTHERWISE. SEPARATE ROOF ACCEPTABLE.

Colorado Springs Utilities — It's how we're all connected | CAST IN PLACE CONCRETE VAULT FOR 3", 4", AND 6" METERS | B3-5 | DATED 06/2015



NOTES:

1. REFERENCE SECTION 2.7.L FOR BACKFLOW PREVENTION ASSEMBLY REQUIREMENTS.
2. NO DRAIN VALVES, OUTLETS OR BRANCH LINES SHALL BE LOCATED BEFORE THE APPROVED BACKFLOW PREVENTION ASSEMBLY.
3. THE APPROVED BACKFLOW PREVENTION ASSEMBLY SHALL BE INSTALLED WITH SOLDERED OR FLANGED ONLY.
4. THE BACKFLOW PREVENTION ASSEMBLY SHALL BE ON AN APPROVED REDUCED PRESSURE PRINCIPLE BACKFLOW PREVENTION ASSEMBLY.
5. REMOVABLE BACKFLOW PREVENTION ASSEMBLIES WILL BE EVALUATED ON A CASE BY CASE BASIS AND WILL ONLY BE APPROVED FOR SEASONAL IRRIGATION USERS.
6. SEASONAL BACKFLOW PREVENTION ASSEMBLIES SHALL BE LOCATED IN A LOCKABLE LID TO PROTECT FROM THEFT.
7. WHERE REMOVAL OF ASSEMBLY IS REQUESTED, FLANGES MUST BE INSTALLED ON THE IN-GROUND SUPPLY AND DISCHARGE PIPING SO THE EXPOSED PIPING OF THE WATER SYSTEM IS SEALED OFF WHILE THE BACKFLOW PREVENTER IS REMOVED.
8. DURING REMOVAL PERIOD, THE VALVE ON THE SUPPLY SIDE SHALL BE SHUT AND THE FLANGES SHALL BE SEALED WITH A BOLTED BLIND FLANGE.
9. FOR SERVICE LINES 4" AND GREATER, PIPE SHALL BE RESTRAINED BETWEEN THE METER PIT AND BACKFLOW PREVENTER.

Colorado Springs Utilities — It's how we're all connected | TYPICAL NON-SINGLE-FAMILY RESIDENTIAL OUTDOOR WATER METER AND REMOVABLE BACKFLOW PREVENTION ASSEMBLY FOR IRRIGATION SYSTEMS | B1-17 | DATED 01/2017

NOT FOR CONSTRUCTION

PCD FILNE NO.: SF2214

DRAWN BY: CBM | JOB DATE: 8/31/2022
APPROVED: KMH | JOB NUMBER: 200541
CAD DATE: 8/31/2022
CAD FILE: J:\2020\200541\CAD\Dwgs\C\CD\EI_Paso_Co\Details

BAR IS ONE INCH ON OFFICIAL DRAWINGS. 0 1"
IF NOT ONE INCH, ADJUST SCALE ACCORDINGLY.

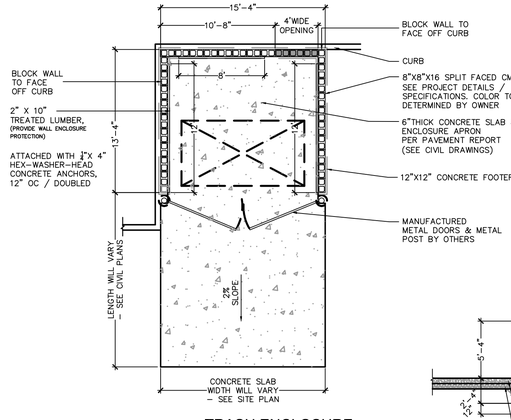
NO.	DATE	BY	REVISION DESCRIPTION

HRGreen — HR GREEN - COLORADO SPRINGS
7222 COMMERCE CENTER DR SUITE 220
COLORADO SPRINGS CO 80919
PHONE: 719.300.4140 TOLL FREE: 800.728.7805
FAX: 844.273.1057 | HRGreen.com

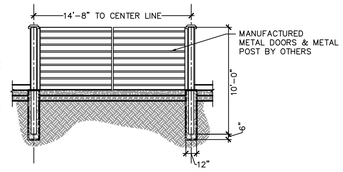
THE COTTAGES AT MESA RIDGE
GOODWIN KNIGHT
EL PASO COUNTY, COLORADO

EL PASO COUNTY CONSTRUCTION DOCUMENTS
DETAILS

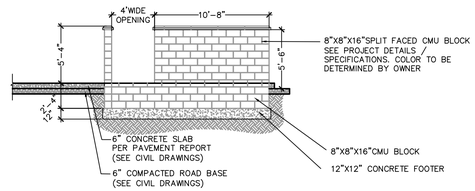
SHEET DT | 31



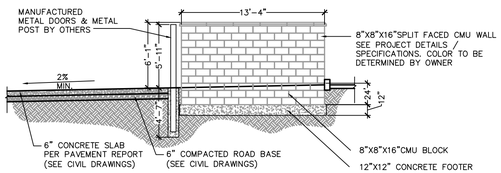
TRASH ENCLOSURE
- PLAN VIEW



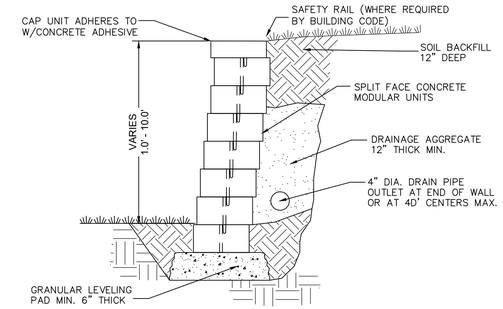
TRASH ENCLOSURE
- FRONT ELEVATION



TRASH ENCLOSURE -
REAR SIDE ELEVATION

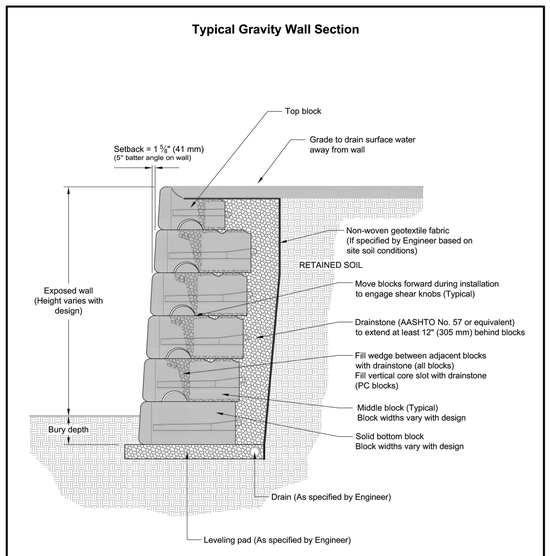


TRASH ENCLOSURE
- SIDE ELEVATION



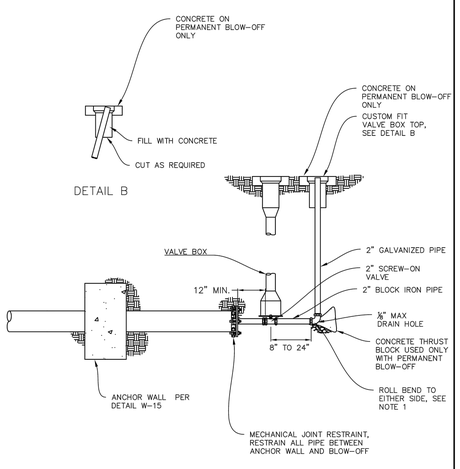
NOTES:
1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
2. RETAINING WALLS TO BE (ALTERNATE #1) AMASTONE MODULAR BLOCK WALL OR EQUAL (FINISH STRAIGHT W/ TEXTURE) OR (ALTERNATE #2) REDI-ROCK LEDGESTONE
3. WALLS THAT RETAIN MORE THAN 4 VERTICAL FEET SHALL REQUIRE A BUILDING PERMIT FROM THE PPRBD. STRUCTURAL DESIGNS TO BE PROVIDED BY CONTRACTOR PRIOR TO CONSTRUCTION.
4. SEE CONSTRUCTION DRAWING GRADING SHEETS FOR TOP/BOTTOM/HEIGHT OF ALL WALLS
5. SAFETY RAIL TO BE INSTALLED WHERE REQUIRED BY CODE.

TYPICAL DETAIL - BLOCK RETAINING WALL
ALTERNATE 1
SCALE: NTS



This drawing is for reference only. Determination of the suitability and/or manner of use of any details contained in this document is the sole responsibility of the design engineer of record. Final project designs, including all construction details, shall be prepared by a licensed professional engineer using the actual conditions of the proposed site.

DRAWN BY:	JRJ	TITLE: Typical Gravity Wall Detail	REDI-ROCK® 05481 US 31 SOUTH, CHARLEVOIX, MI 49720 (866) 222-8400 ext 3010 • engineering@redi-rock.com www.redi-rock.com
APPROVED BY:	JRJ		
DATE:	17MAR2016		
SHEET:	1 of 1	FILE: 1 Typical Gravity Wall Detail 031716.dwg	



NOTES:
1. IF APPROPRIATE LOCATION FOR DISCHARGED WATER CANNOT E REACHED BY ROLLING THE BEND, ADDITIONAL BENDS MAY BE REQUIRED BY THE INSPECTOR
2. ENTIRE BLOW-OFF ASSEMBLY MUST BE FULLY SUPPORTED. CONCRETE BLOCKS MAY BE REQUIRED.
3. PIPE DOPE APPROVED FOR USE IN POTABLE WATER SYSTEMS MUST BE USED ON ALL THREADED JOINTS.

TEMP. & PERMANENT BLOW-OFF ASSEMBLY FOR 6" & 8" MAINS

Drawn: RKB	Revised:	Widefield Water and Sanitation District
Date: MAY 6, 2020	Revised:	W-18
Scale: N.T.S.	Revised:	
Revised:	Revised:	
Revised:	Revised:	
Revised:	Revised:	

NOT FOR CONSTRUCTION

PCD FILNE NO.: SF2214

DRAWN BY: CBM	JOB DATE: 8/31/2022	BAR IS ONE INCH ON OFFICIAL DRAWINGS. 0 1" IF NOT ONE INCH, ADJUST SCALE ACCORDINGLY.	
APPROVED: KMH	JOB NUMBER: 200541		
CAD DATE: 9/1/2022			
CAD FILE: J:\2020\200541\CAD\Dwgs\C\CD\El _Paso_Co\Details			

NO.	DATE	BY	REVISION DESCRIPTION

HRGreen
HR GREEN - COLORADO SPRINGS
7222 COMMERCE CENTER DR SUITE 220
COLORADO SPRINGS CO 80919
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FAX: 844.273.1057 | HRGreen.com

THE COTTAGES AT MESA RIDGE
GOODWIN KNIGHT
EL PASO COUNTY, COLORADO

EL PASO COUNTY CONSTRUCTION DOCUMENTS
DETAILS

SHEET DT

THE COTTAGES AT MESA RIDGE
CITY OF FOUNTAIN CONSTRUCTION DOCUMENTS

A PORTION OF THE NORTHEAST QUARTER OF SECTION 29, THE SOUTHEAST QUARTER OF SECTION 20, THE SOUTHWEST QUARTER OF SECTION 21, & THE NORTHWEST QUARTER OF SECTION 28, TOWNSHIP 13 SOUTH, RANGE 65 WEST OF THE 6TH P.M., COUNTY OF EL PASO, STATE OF COLORADO

Please provide a note that indicates that the CD's for the City of Fountain portion of the project are for reference only.

HR GREEN: ADDRESSED (ADD TO FINAL PDF AS MARK UP).

LEGAL DESCRIPTION:

THAT PORTION OF THE NORTHWEST QUARTER OF SECTION 28 AND THE NORTHEAST QUARTER OF SECTION 29, TOWNSHIP 15 SOUTH, RANGE 65 WEST OF THE 6TH P.M., COUNTY OF EL PASO, STATE OF COLORADO, DESCRIBED AS FOLLOWS:

BASIS OF BEARINGS: BEARINGS ARE BASED UPON THE NORTH LINE OF THE NORTHEAST QUARTER OF SAID SECTION 29, MONUMENTED AT THE WEST END WITH A 3.25" ALUMINUM CAP IN CONCRETE STAMPED "PLS 4842" AND MONUMENTED AT THE EAST END WITH A #6 REBAR AND 3.25" ALUMINUM CAP STAMPED "PLS 38141" AND ASSUMED TO BEAR S 89°57'13" E A FIELD MEASURED DISTANCE OF 2,652.37 FEET.

BENCHMARK: ELEVATIONS ARE BASED UPON THE FOUNTAIN SANITATION DISTRICT POINT N-1, BEING A 2" BRASS CAP IN CONCRETE AT THE NORTHEAST CORNER OF MESA RIDGE PARKWAY AND FOUNTAIN MESA ROAD. (ELEVATION=5750.57 NGVD 29).

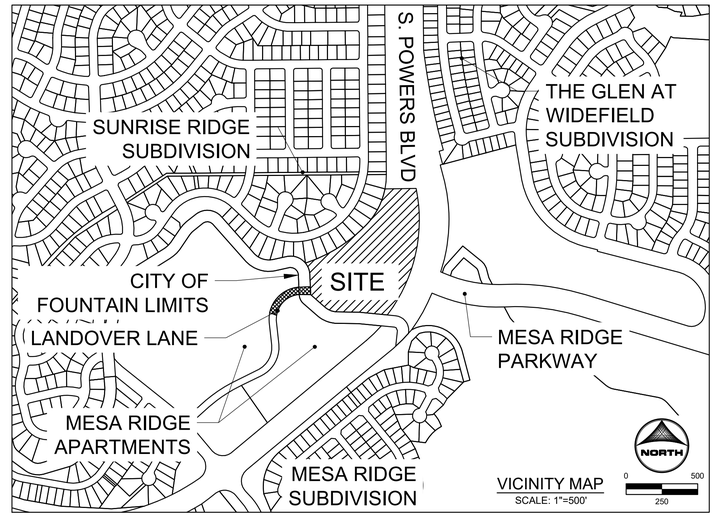
BEGINNING AT THE NORTHWEST CORNER OF THE NORTHWEST QUARTER OF SAID SECTION 28;
THENCE N 89°41'59" E ALONG THE NORTH LINE OF SAID NORTHWEST QUARTER, A DISTANCE OF 117.30 FEET TO A POINT ON THE WEST LINE OF POWERS BOULEVARD AS RECORDED UNDER BOOK 6788 AT PAGE 531 OF THE RECORDS OF THE EL PASO COUNTY CLERK AND RECORDERS OFFICE;
THENCE ALONG THE WEST LINE OF SAID POWERS BOULEVARD, 933.14 FEET ALONG THE ARC OF A 1,096.98 FOOT RADIUS CURVE TO THE RIGHT, HAVING A CENTRAL ANGLE OF 48°44'17" AND A CHORD THAT BEARS S 12°56'23" W, 905.26 FEET TO A POINT ON THE NORTHERLY LINE OF THAT PARCEL OF LAND DESCRIBED UNDER BOOK 5506 AT PAGE 1290 OF SAID RECORDS;
THENCE OF THE FOLLOWING EIGHT (8) COURSES ALONG SAID NORTHERLY LINES AND EASTERLY LINES OF SAID PARCEL OF LAND DESCRIBED UNDER BOOK 5506 AT PAGE 1290:
1) N 84°16'00" W, A DISTANCE OF 198.99 FEET;
2) 46.11 FEET ALONG THE ARC OF A 540.00 FOOT RADIUS TANGENT CURVE TO THE LEFT, HAVING A CENTRAL ANGLE OF 04°53'33" AND A CHORD THAT BEARS N 86°42'46" W, 46.10 FEET;
3) N 89°09'33" W, A DISTANCE OF 124.09 FEET;
4) 100.02 FEET ALONG THE ARC OF A 140.00 FOOT RADIUS TANGENT CURVE TO THE RIGHT, HAVING A CENTRAL ANGLE OF 40°56'07" AND A CHORD THAT BEARS N 68°41'30" W, 97.91 FEET;
5) N 48°13'27" W, A DISTANCE OF 126.77 FEET;
6) 6.49 FEET ALONG THE ARC OF AN 8.00 FOOT RADIUS TANGENT CURVE TO THE RIGHT, HAVING A CENTRAL ANGLE OF 46°29'23" AND A CHORD THAT BEARS N 24°58'45" W, 6.31 FEET;
7) N 01°44'04" W, A DISTANCE OF 137.18 FEET;
8) 87.71 FEET ALONG THE ARC OF A 135.00 FOOT RADIUS TANGENT CURVE TO THE LEFT, HAVING A CENTRAL ANGLE OF 37°13'35" AND A CHORD THAT BEARS N 20°21'02" W, 86.18 FEET TO THE SOUTHWEST CORNER OF LOT 15, BLOCK 3, SUNRISE RIDGE SUBDIVISION FILING NO. 8 AS RECORDED UNDER RECEPTION NO. 1722613 OF SAID RECORDS;
THENCE THE FOLLOWING TWO (2) COURSES ALONG THE EASTERLY LINE OF SAID SUNRISE RIDGE SUBDIVISION FILING NO. 8: 1) 511.39 FEET ALONG THE ARC OF A 1,034.60 FOOT RADIUS CURVE TO THE LEFT, HAVING A CENTRAL ANGLE OF 28°19'14" AND A CHORD THAT BEARS N 58°13'41" E, 506.20 FEET TO A POINT OF COMPOUND CURVATURE;
2) 283.12 FEET ALONG THE ARC OF A 500.00 FOOT RADIUS CURVE TO THE LEFT, HAVING A CENTRAL ANGLE OF 32°26'36" AND A CHORD THAT BEARS N 27°50'47" E, 279.35 FEET TO A POINT ON THE NORTH LINE OF SAID NORTHEAST QUARTER;
THENCE N 89°57'13" E ALONG THE NORTH LINE OF SAID NORTHEAST QUARTER, A DISTANCE OF 115.21 FEET TO THE POINT OF BEGINNING.

CONTAINING A CALCULATED AREA OF 445,104 SQUARE FEET (10.218 ACRES) OF LAND, MORE OR LESS.

TO BE PLATTED AS "COTTAGES AT MESA RIDGE"

GRADING AND EROSION CONTROL NOTES:

1. ANY LAND DISTURBANCE BY ANY OWNER, DEVELOPER, BUILDER, CONTRACTOR, OR OTHER PERSON SHALL COMPLY WITH THE BASIC GRADING, EROSION AND STORMWATER QUALITY CONTROL REQUIREMENTS AND GENERAL PROHIBITIONS NOTED IN THE DRAINAGE CRITERIA MANUAL VOLUME II.
2. NO CLEARING, GRADING, EXCAVATION, FILLING, OR OTHER LAND DISTURBING ACTIVITIES SHALL BE PERMITTED UNTIL SIGNOFF AND ACCEPTANCE OF THE GRADING PLAN AND EROSION AND STORMWATER QUALITY CONTROL PLAN IS RECEIVED FROM EDRD.
3. THE INSTALLATION OF THE FIRST LEVEL OF TEMPORARY EROSION CONTROL FACILITIES AND BMP'S SHALL BE INSTALLED AND INSPECTED PRIOR TO ANY EARTH DISTURBANCE OPERATIONS TAKING PLACE. CALL CITY STORMWATER INSPECTIONS, 385-5980, 48 HOURS PRIOR TO CONSTRUCTION.
4. SEDIMENT (MUD AND DIRT) TRANSPORTED ONTO A PUBLIC ROAD, REGARDLESS OF THE SIZE OF THE SITE, SHALL BE CLEANED IMMEDIATELY.
5. CONCRETE WASH WATER SHALL NOT BE DISCHARGED TO OR ALLOWED TO RUNOFF TO STATE WATERS, INCLUDING ANY SURFACE OR SUBSURFACE STORM DRAINAGE SYSTEM OR FACILITIES.
6. SOIL EROSION CONTROL MEASURES FOR ALL SLOPES, CHANNELS, DITCHES, OR ANY DISTURBED LAND AREA SHALL BE COMPLETED WITHIN TWENTY-ONE (21) CALENDAR DAYS AFTER FINAL GRADING OR FINAL EARTH DISTURBANCE HAS BEEN COMPLETED. DISTURBED AREAS AND STOCKPILES WHICH ARE NOT AT FINAL GRADE BUT WILL REMAIN DORMANT FOR LONGER THAN THIRTY (30) DAYS SHALL ALSO BE MULCHED WITHIN TWENTY-ONE (21) DAYS AFTER INTERIM GRADING. AN AREA THAT IS GOING TO REMAIN IN AN INTERIM STATE FOR MORE THAN SIXTY (60) DAYS SHALL ALSO BE SEEDED. ALL TEMPORARY SOIL EROSION CONTROL MEASURES AND BMP'S SHALL BE MAINTAINED UNTIL PERMANENT SOIL EROSION CONTROL MEASURES ARE IMPLEMENTED.
7. THE GRADING AND EROSION CONTROL PLAN WILL BE SUBJECT TO RE-REVIEW AND RE-ACCEPTANCE BY EDRD SHOULD ANY OF THE FOLLOWING OCCUR: GRADING DOES NOT COMMENCE WITHIN TWELVE (12) MONTHS OF THE CITY ENGINEER'S ACCEPTANCE OF THE PLAN, A CHANGE IN PROPERTY OWNERSHIP, PROPOSED DEVELOPMENT CHANGES, OR PROPOSED GRADING REVISIONS.
8. THE PLAN SHALL NOT SUBSTANTIALLY CHANGE THE DEPTH OF COVER, OR ACCESS EXISTING UTILITY LINES. ACCEPTANCE OF THIS PLAN DOES NOT CONSTITUTE APPROVAL TO GRADE IN ANY UTILITY EASEMENT OR RIGHT-OF-WAY. APPROVALS TO GRADE WITHIN UTILITY EASEMENTS MUST BE OBTAINED FROM THE APPROPRIATE UTILITY COMPANY. IT IS NOT PERMISSIBLE FOR ANY PERSON TO MODIFY THE GRADE OF THE EARTH ON ANY COLORADO SPRINGS UTILITIES EASEMENT OR UTILITY RIGHT-OF-WAY WITHOUT THEIR WRITTEN APPROVAL. THE PLAN SHALL NOT INCREASE OR DIVERT WATER TOWARDS UTILITY FACILITIES. ANY CHANGES TO EXISTING UTILITY FACILITIES TO ACCOMMODATE THE PLAN MUST BE APPROVED BY THE AFFECTED UTILITY OWNER PRIOR TO IMPLEMENTING THE PLAN. THE COST TO RELOCATE OR PROTECT EXISTING UTILITIES OR TO PROVIDE INTERIM ACCESS IS THE APPLICANT'S EXPENSE.



VICINITY MAP
SCALE: 1"=500'

STAKEHOLDERS:

OWNER:	CSJ NO 1 LLC 111 S. TEJON STREET, SUITE 222 COLORADO SPRINGS, CO 80903
DEVELOPER:	GOODWIN KNIGHT 8605 EXPLORER DRIVE, SUITE 250 COLORADO SPRINGS, CO 80920
ATTN:	DAVE MORRISON
APPLICANT:	HR GREEN DEVELOPMENT, LLC 1975 RESEARCH PKWY, SUITE 230 COLORADO SPRINGS, CO 80920
ATTN:	PHIL STUEPFERT, KEN HUHN
SURVEYOR:	BARRON LAND, LLC 2790 N ACADEMY BLVD #311 COLORADO SPRINGS, CO 80917 ATTN: SPENCER BARRON

SHEET INDEX:

ENGINEER'S STATEMENT:

SIGNATURE (AFFIX SEAL): _____ DATE: _____

COLORADO PROFESSIONAL ENGINEER NO:_____

ACCEPTANCE:

THESE PLAN SUBMITTED APPEAR TO BE IN CONFORMANCE WITH THE CITY OF FOUNTAIN SUBMITTAL REQUIREMENTS AND STANDARD ENGINEERING PRINCIPLES AND PRACTICES APPEAR TO HAVE BEEN FOLLOWED. THE PROFESSIONAL ENGINEER SUBMITTED AND SEALING THE PLANS IS SOLELY RESPONSIBLY FOR THEIR ACCURACY AND VALIDITY. THE REVIEW IS ONLY VALID FOR ONE (1) YEAR FROM THE DATE BELOW.

_____ _____
BRANDY R WILLIAMS, P.E., CITY ENGINEER DATE:

DETAILED DRAINAGE CONSTRUCTION PLANS AND SPECIFICATIONS ENGINEER'S STATEMENT:

THESE DETAILED PLANS AND SPECIFICATIONS WERE PREPARED UNDER MY DIRECT SUPERVISION. SAID DETAILED PLANS AND SPECIFICATIONS HAVE BEEN PREPARED ACCORDING TO THE ESTABLISHED CRITERIA FOR DETAILED DRAINAGE PLANS AND SPECIFICATIONS, AND SAID DETAILED PLANS AND SPECIFICATIONS ARE IN CONFORMITY WITH THE MASTER PLAN OF THE DRAINAGE BASIN. SAID DRAINAGE PLANS AND SPECIFICATIONS MEET THE PURPOSES FOR WHICH THE PARTICULAR DRAINAGE FACILITY(S) IS DESIGNED. I ACCEPT RESPONSIBILITY FOR ANY LIABILITY CAUSED BY ANY NEGLIGENT ACTS, ERRORS OR OMISSIONS ON MY PART IN PREPARATION OF THE DETAILED PLANS AND SPECIFICATIONS.

SIGNATURE (AFFIX SEAL): _____ DATE: _____

COLORADO PROFESSIONAL ENGINEER NO:_____

CITY OF FOUNTAIN DETAILED DRAINAGE CONSTRUCTION PLANS AND SPECIFICATIONS REVIEW:

PLAN REVIEW BY THE CITY OF FOUNTAIN IS PROVIDED ONLY FOR GENERAL CONFORMANCE WITH THE DESIGN CRITERIA. THE CITY OF FOUNTAIN IS NOT RESPONSIBLE FOR THE ACCURACY AND ADEQUACY OF THE DESIGN, DIMENSIONS, AND/OR ELEVATIONS WHICH SHALL BE CONFIRMED AT THE JOB SITE. THE CITY OF FOUNTAIN, THROUGH THE APPROVAL OF THIS DOCUMENT, ASSUMED NO RESPONSIBILITY FOR COMPLETENESS AND/OR ACCURACY OF THIS DOCUMENT.

_____ _____
BRANDY R WILLIAMS, P.E., CITY ENGINEER DATE:

ENGINEER'S STATEMENT

THIS GRADING AND EROSION CONTROL PLAN WAS PREPARED UNDER MY DIRECT SUPERVISION AND IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. IF SUCH WORK IS PERFORMED IN ACCORDANCE WITH THE GRADING AND EROSION CONTROL PLAN, THE WORK WILL NOT BECOME A HAZARD TO LIFE AND LIMB, ENDANGER PROPERTY, OR ADVERSELY AFFECT THE SAFETY, USE OR STABILITY OF A PUBLIC WAY, DRAINAGE CHANNEL, OR OTHER PROPERTY.

SIGNATURE (AFFIX SEAL) DATE

OWNER'S STATEMENT

THE OWNER WILL COMPLY WITH THE REQUIREMENTS OF THE GRADING AND EROSION CONTROL PLAN INCLUDING TEMPORARY CONTROL MEASURE INSPECTION REQUIREMENTS AND FINAL STABILIZATION REQUIREMENTS, ACCORDING TO THE CITY OF COLORADO SPRINGS STORMWATER CONSTRUCTION MANUAL. I ACKNOWLEDGE THE RESPONSIBILITY TO DETERMINE WHETHER THE CONSTRUCTION ACTIVITIES ON THESE PLANS REQUIRE COLORADO DISCHARGE PERMIT SYSTEM (CDPS) PERMITTING FOR STORMWATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY.

DEVELOPER/OWNER SIGNATURE: _____DATE:_____

NAME OF DEVELOPER/OWNER: _____

DBA: _____ PHONE: _____

TITLE: _____ EMAIL: _____

ADDRESS:_____

FAX: _____

CITY OF FOUNTAIN GRADING AND EROSION CONTROL REVIEW:

THIS GRADING PLAN AND EROSION CONTROL PLAN IS FILED IN ACCORDANCE WITH SECTION 12.04.160 OF THE CODE OF THE CITY OF FOUNTAIN. THIS PLAN IS REVIEWED WITH THE DRAINAGE CRITERIA MANUAL, VOL. I (JANUARY 2021) AND VOL. II (DECEMBER 2020); STORMWATER CONSTRUCTION MANUAL; LATEST REVISIONS.

BRANDY R WILLIAMS, P.E., CITY ENGINEER DATE:

NOTES:

DRAWN BY: NQJ	JOB DATE: 8/22/2022	BAR IS ONE INCH ON OFFICIAL DRAWINGS. 0 1" IF NOT ONE INCH ADJUST SCALE ACCORDINGLY.	
APPROVED: KMH	JOB NUMBER: 200541		
CAD DATE: 8/22/2022			
CAD FILE: J:\2020\200541\CAD\Dwgs\C\CD\C.O.F\Cover			

NO.	DATE	BY	REVISION DESCRIPTION

HRGreen
HR GREEN - COLORADO SPRINGS
7222 COMMERCE CENTER DR SUITE 220
COLORADO SPRINGS CO 80919
PHONE: 719.300.4140 TOLL FREE: 800.728.7805
FAX: 844.273.1057 | HRGreen.com

THE COTTAGES AT MESA RIDGE
GOODWIN KNIGHT
FOUNTAIN, COLORADO

CITY OF FOUNTAIN CONSTRUCTION DOCUMENTS
COVER

SHEET CV

1

LEGEND

	EXISTING	PROPOSED
MATCH LINE		
PHASE LINE		
SECTION LINE		
PROPERTY LINE		
EASEMENT LINE		
RIGHT OF WAY		
CENTERLINE		
CHAIN LINK FENCE		
WOODEN FENCE		
ROD IRON FENCE		
GUARDRAIL		
CABLE TV	TV	TV
U.G. ELECTRIC	UE	UE
OVERHEAD ELECTRIC	OE	OE
FIBER OPTIC	FO	FO
GAS MAIN		
SANITARY SEWER	SS	
STORM DRAIN		
TELEPHONE	UT	UT
WATER MAIN	W	W
SWALE		
TRAIL		
CURB & GUTTER		
DRAINAGE BASIN		
INDEX CONTOUR		
INTER. CONTOUR		
100-YR FLOODPLAIN		
FLOODWAY		
EDGE OF WETLANDS		

DRAINAGE

	EXISTING	PROPOSED
DRAINAGE BASIN		
BASIN TAG		I.D. / AREA
DESIGN POINT		1

STORM SEWER

	EXISTING	PROPOSED
MANHOLE	ST	D
STORM INLET		
FLARED END SECTION		
RIPRAP		

SANITARY SEWER

CLEAN OUT		
MANHOLE		S
PLUG		

WATER

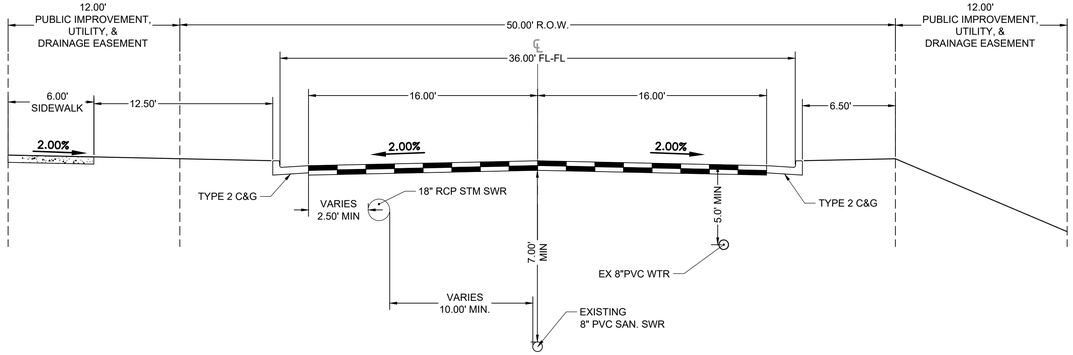
FIRE HYDRANT		
FIRE DEPT. CONNECTION	FDC	FDC
GATE VALVE		
MANHOLE	W	W
METER	WM	WM
TEE		
REDUCER		

DRY UTILITIES

ELECTRIC METER	M
ELECTRIC PEDESTAL	E
ELECTRICAL CABINET	E
ELECTRIC VAULT	EV
FIBER OPTIC PULL BOX	F
FIBER OPTIC MANHOLE	FO
FIBER OPTIC PEDESTAL	F
FIBER OPTIC SIGN	
FIBER OPTIC VAULT	FV
GAS METER	M
GAS SIGN	
GAS VAULT	
TELEPHONE CABINET	T
TELEPHONE MANHOLE	TH
TELEPHONE SIGNAL/MAST	T
TELEPHONE SIGN	
TELEPHONE PEDESTAL	T
TRANSFORMER	
LIGHT POLE	
FIBER OPTIC VAULT	FV

MISCELLANEOUS

SIGN	
BOLLLARD	
ACCESSIBLE PARKING	



LANDOVER LANE - TYPICAL SECTION
(PUBLIC LOCAL - CITY OF FOUNTAIN)

NOT FOR CONSTRUCTION

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NO.	DATE	BY	REVISION DESCRIPTION

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COLORADO SPRINGS CO 80919
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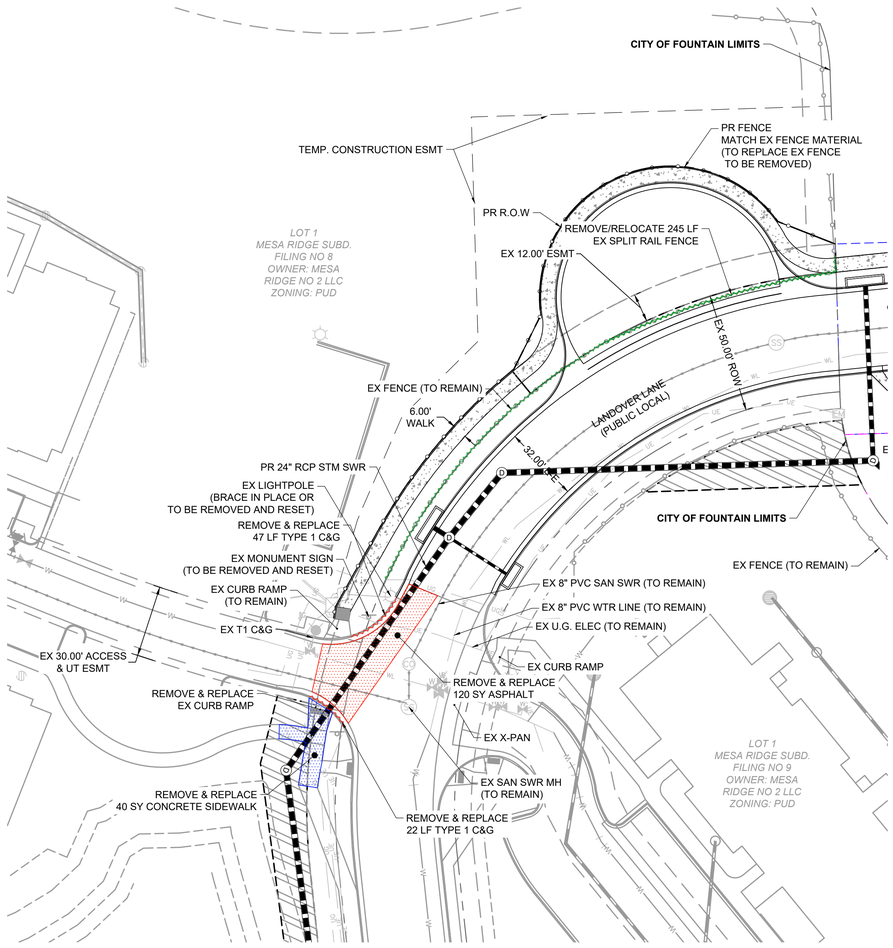
THE COTTAGES AT MESA RIDGE
GOODWIN KNIGHT
FOUNTAIN, COLORADO

GOODWIN KNIGHT

CITY OF FOUNTAIN CONSTRUCTION DOCUMENTS
LEGEND & TYPICAL SECTIONS

SHEET LG

2



DEMOLITION LEGEND:

- ASPHALT REMOVAL
- CONCRETE REMOVAL
- CURB & GUTTER REMOVAL
- FENCE REMOVAL

ENGINEER'S STATEMENT:

SIGNATURE (AFFIX SEAL): _____ DATE: _____

COLORADO PROFESSIONAL ENGINEER NO:_____

ACCEPTANCE:

THESE PLAN SUBMITTED APPEAR TO BE IN CONFORMANCE WITH THE CITY OF FOUNTAIN SUBMITTAL REQUIREMENTS AND STANDARD ENGINEERING PRINCIPLES AND PRACTICES APPEAR TO HAVE BEEN FOLLOWED. THE PROFESSIONAL ENGINEER SUBMITTED AND SEALING THE PLANS IS SOLELY RESPONSIBLY FOR THEIR ACCURACY AND VALIDITY. THE REVIEW IS ONLY VALID FOR ONE (1) YEAR FROM THE DATE BELOW.

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BRANDY R WILLIAMS, P.E., CITY ENGINEER DATE: _____

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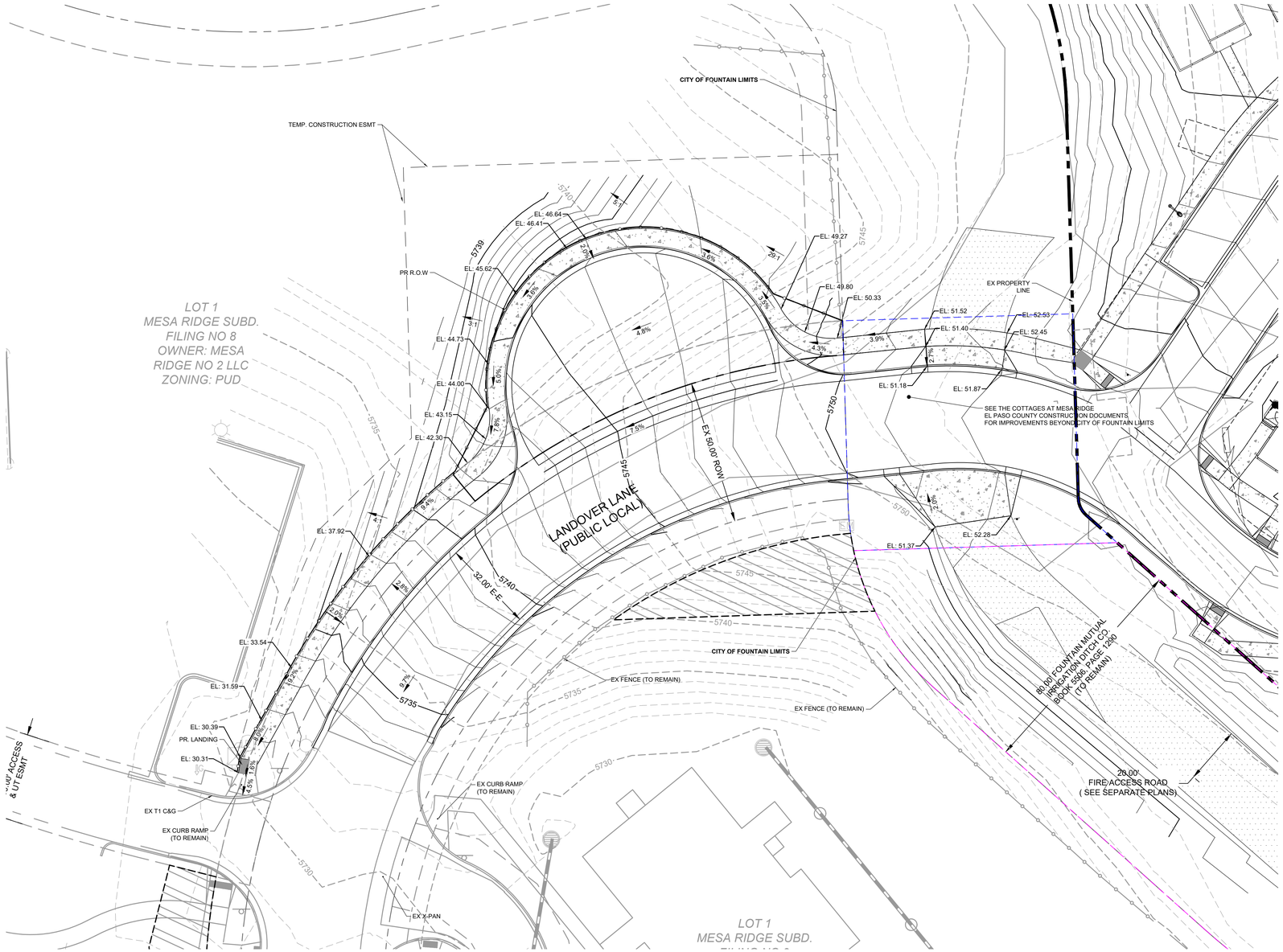
THE COTTAGES AT MESA RIDGE
GOODWIN KNIGHT
FOUNTAIN, COLORADO

GOODWIN KNIGHT

CITY OF FOUNTAIN CONSTRUCTION DOCUMENTS
DEMOLITION PLAN

SHEET DP 3



ENGINEER'S STATEMENT:

SIGNATURE (AFFIX SEAL): _____ DATE: _____

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THE COTTAGES AT MESA RIDGE
GOODWIN KNIGHT
FOUNTAIN, COLORADO

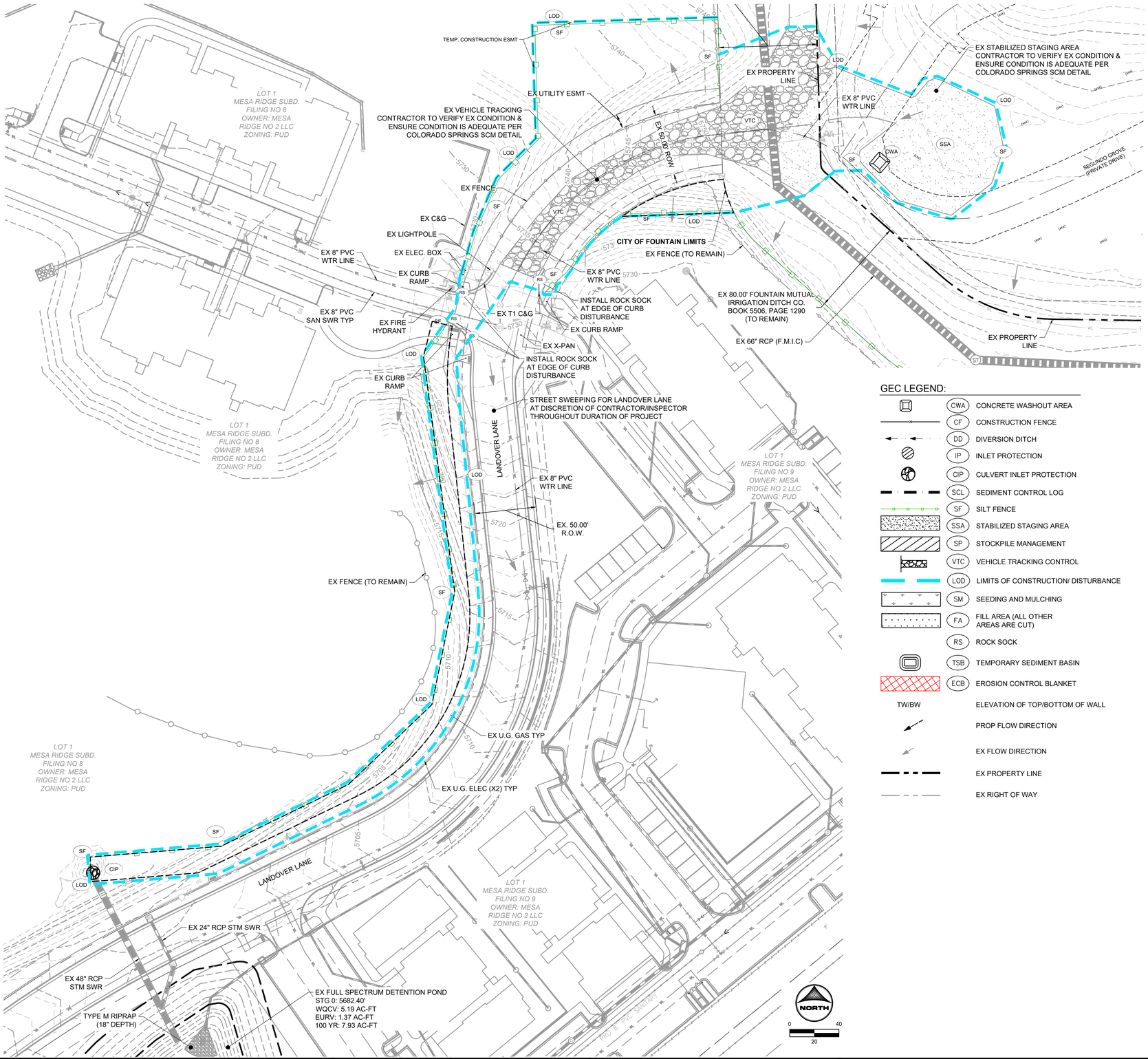
GOODWIN KNIGHT

CITY OF FOUNTAIN CONSTRUCTION DOCUMENTS

DETAILED GRADING

SHEET ----

4



GEC LEGEND:

CWA	CONCRETE WASHOUT AREA
CF	CONSTRUCTION FENCE
DD	DIVERSION DITCH
IP	INLET PROTECTION
CIP	CULVERT INLET PROTECTION
SCL	SEDIMENT CONTROL LOG
SF	SILT FENCE
SSA	STABILIZED STAGING AREA
SP	STOCKPILE MANAGEMENT
VTC	VEHICLE TRACKING CONTROL
LOD	LIMITS OF CONSTRUCTION/ DISTURBANCE
SM	SEEDING AND MULCHING
FA	FILL AREA (ALL OTHER AREAS ARE CUT)
RS	ROCK SOCK
TSB	TEMPORARY SEDIMENT BASIN
ECB	EROSION CONTROL BLANKET
TW/BW	ELEVATION OF TOP/BOTTOM OF WALL
	PROP FLOW DIRECTION
	EX FLOW DIRECTION
	EX PROPERTY LINE
	EX RIGHT OF WAY

GRADING & EROSION CONTROL PLAN NOTES:

1. SEE SHEETS 11–13 FOR CITY OF COLORADO SPRINGS GRADING AND EROSION CONTROL DETAILS.
2. ALL STORMWATER MANAGEMENT MEASURES SHOWN ON THIS PLAN MUST BE INSTALLED AND MAINTAINED PER THE COLORADO SPRINGS STORMWATER CONSTRUCTION MANUAL; LATEST REVISIONS.
3. AREA WITHIN LIMITS OF DISTURBANCE TO BE CLEARED, GRUBBED AND STOCKPILED PRIOR TO IMPORT OF ANY FILL.
4. ALL 3:1 SLOPES MUST BE RECEIVE SLOPE TRACKING TREATMENT AND EROSION CONTROL BLANKET.
5. STOCKPILES REQUIRED DURING ONSITE CONSTRUCTION ACTIVITIES WILL BE PLACED AT THE DISCRETION OF THE CONTRACTOR. STOCKPILING OF MATERIAL MUST NOT OCCUR OUTSIDE THE LIMITS OF DISTURBANCE SHOWN ON THIS PLAN.
6. NON–STRUCTURAL CONTROLS (I.E. STREET SWEEPING) WILL BE AT THE DISCRETION OF THE PROJECT'S CERTIFIED GEC ADMINISTRATOR THROUGHOUT THE DURATION OF LAND DISTURBING ACTIVITIES.
7. THERE ARE NO ANTICIPATED ASPHALT AND/OR CONCRETE BATCH PLANTS, OR MASONRY MIX STATIONS ASSOCIATED WITH THIS PROJECT. IF THE CONTRACTOR REQUIRES A ASPHALT/CONCRETE BATCH PLANTS OR MASONRY MIX STATIONS, THESES PLANS WILL BE AMENDED AS REQUIRED.
8. THERE ARE NO EXISTING PRESERVATION EASEMENTS LOCATED ON SITE.
9. ONSITE EXISTING VEGETATION IS NATIVE GRASSES AND WEEDS. THERE IS NO NOTABLE VEGETATION OTHERWISE.

PROJECT INFO:

TOTAL DISTURBANCE AREA = 1.31 AC

RECEIVING WATERS: JIMMY CAMP CREEK

ANTICIPATED START OF CONSTRUCTION: SPRING 2023

ANTICIPATED END OF LAND DISTURBANCE: FALL 2023

ANTICIPATED FINAL STABILIZATION: WINTER 2023

ENGINEER'S STATEMENT

THIS GRADING AND EROSION CONTROL PLAN WAS PREPARED UNDER MY DIRECT SUPERVISION AND IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. IF SUCH WORK IS PERFORMED IN ACCORDANCE WITH THE GRADING AND EROSION CONTROL PLAN, THE WORK WILL NOT BECOME A HAZARD TO LIFE AND LIMB, ENDANGER PROPERTY, OR ADVERSELY AFFECT THE SAFETY, USE OR STABILITY OF A PUBLIC WAY, DRAINAGE CHANNEL, OR OTHER PROPERTY.

SIGNATURE (AFFIX SEAL) DATE

OWNER'S STATEMENT

THE OWNER WILL COMPLY WITH THE REQUIREMENTS OF THE GRADING AND EROSION CONTROL PLAN INCLUDING TEMPORARY CONTROL MEASURE INSPECTION REQUIREMENTS AND FINAL STABILIZATION REQUIREMENTS, ACCORDING TO THE CITY OF COLORADO SPRINGS STORMWATER CONSTRUCTION MANUAL. I ACKNOWLEDGE THE RESPONSIBILITY TO DETERMINE WHETHER THE CONSTRUCTION ACTIVITIES ON THESE PLANS REQUIRE COLORADO DISCHARGE PERMIT SYSTEM (CDPS) PERMITTING FOR STORMWATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY.

DEVELOPER/OWNER SIGNATURE: _____ DATE: _____

NAME OF DEVELOPER/OWNER: _____

DBA: _____ PHONE: _____

TITLE: _____ EMAIL: _____

ADDRESS: _____

FAX: _____

CITY OF FOUNTAIN GRADING AND EROSION CONTROL REVIEW:

THIS GRADING PLAN AND EROSION CONTROL PLAN IS FILED IN ACCORDANCE WITH SECTION 12.04.160 OF THE CODE OF THE CITY OF FOUNTAIN. THIS PLAN IS REVIEWED WITH THE DRAINAGE CRITERIA MANUAL, VOL. I (JANUARY 2021) AND VOL. II (DECEMBER 2020); STORMWATER CONSTRUCTION MANUAL; LATEST REVISIONS.

BRANDY R WILLIAMS, P.E., CITY ENGINEER DATE

NOTES:

NOT FOR CONSTRUCTION

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NO.	DATE	BY	REVISION DESCRIPTION

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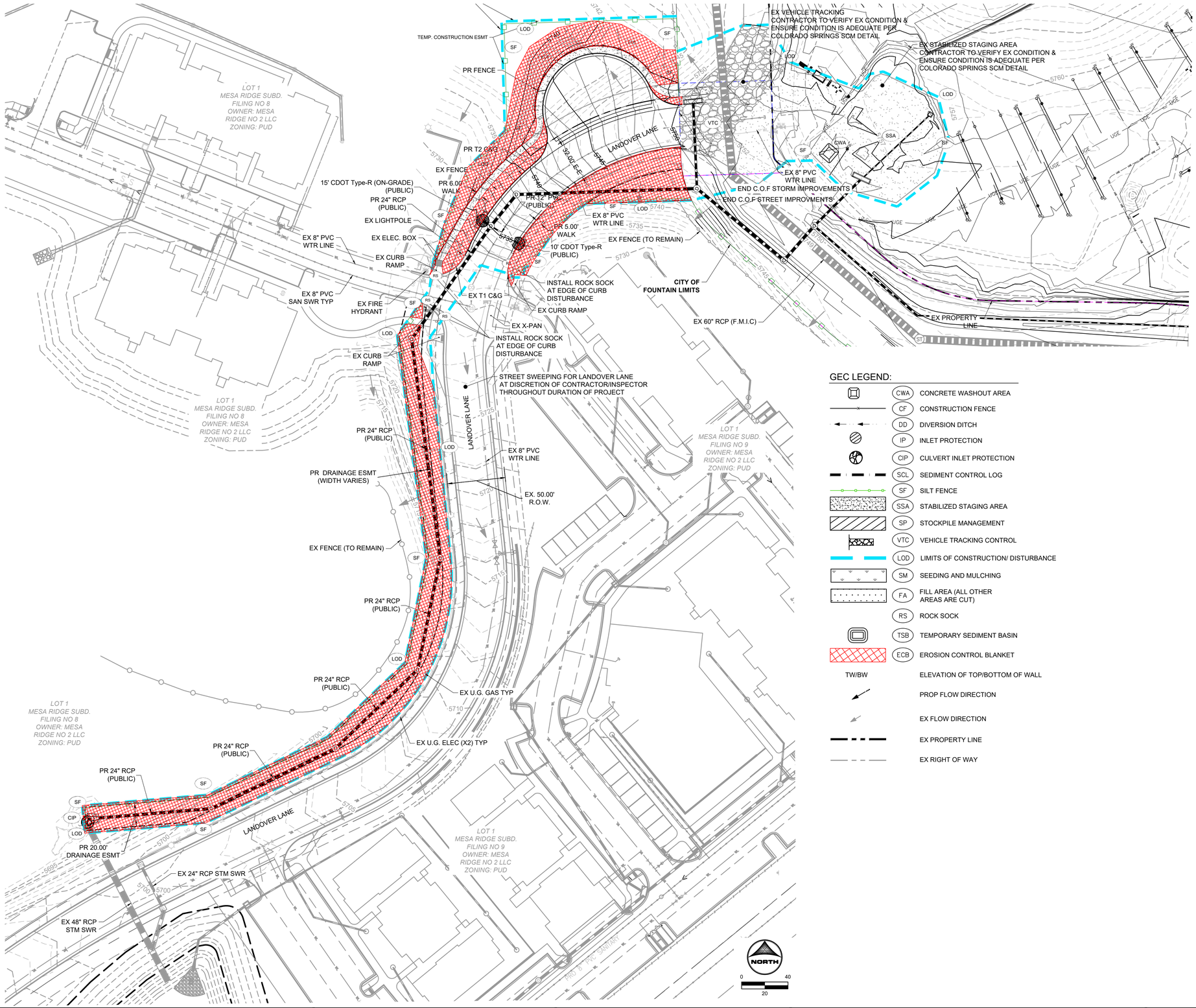
THE COTTAGES AT MESA RIDGE
GOODWIN KNIGHT
FOUNTAIN, COLORADO

CITY OF FOUNTAIN CONSTRUCTION DOCUMENTS
GEC - INITIAL PLAN

SHEET GEC



GEC LEGEND:

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GRADING & EROSION CONTROL PLAN NOTES:

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PROJECT INFO:

TOTAL DISTURBANCE AREA = 1.31 AC

RECEIVING WATERS: JIMMY CAMP CREEK

ANTICIPATED START OF CONSTRUCTION: SPRING 2023

ANTICIPATED END OF LAND DISTURBANCE: FALL 2023

ANTICIPATED FINAL STABILIZATION: WINTER 2023

ENGINEER'S STATEMENT

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OWNER'S STATEMENT

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DBA: _____ PHONE: _____

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CITY OF FOUNTAIN GRADING AND EROSION CONTROL REVIEW:

THIS GRADING PLAN AND EROSION CONTROL PLAN IS FILED IN ACCORDANCE WITH SECTION 12.04.160 OF THE CODE OF THE CITY OF FOUNTAIN. THIS PLAN IS REVIEWED WITH THE DRAINAGE CRITERIA MANUAL, VOL. I (JANUARY 2021) AND VOL. II (DECEMBER 2020); STORMWATER CONSTRUCTION MANUAL; LATEST REVISIONS.

BRANDY R WILLIAMS, P.E., CITY ENGINEER DATE

NOTES:

NOT FOR CONSTRUCTION

DRAWN BY: CBM JOB DATE: 8/22/2022
APPROVED: KEN JOB NUMBER: 200541
CAD DATE: 8/22/2022
CAD FILE: J:\2020\200541\CAD\Dwgs\C\CD\C.O.F\GEC_Interim

BAR IS ONE INCH ON OFFICIAL DRAWINGS. 0 1"
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NO.	DATE	BY	REVISION DESCRIPTION

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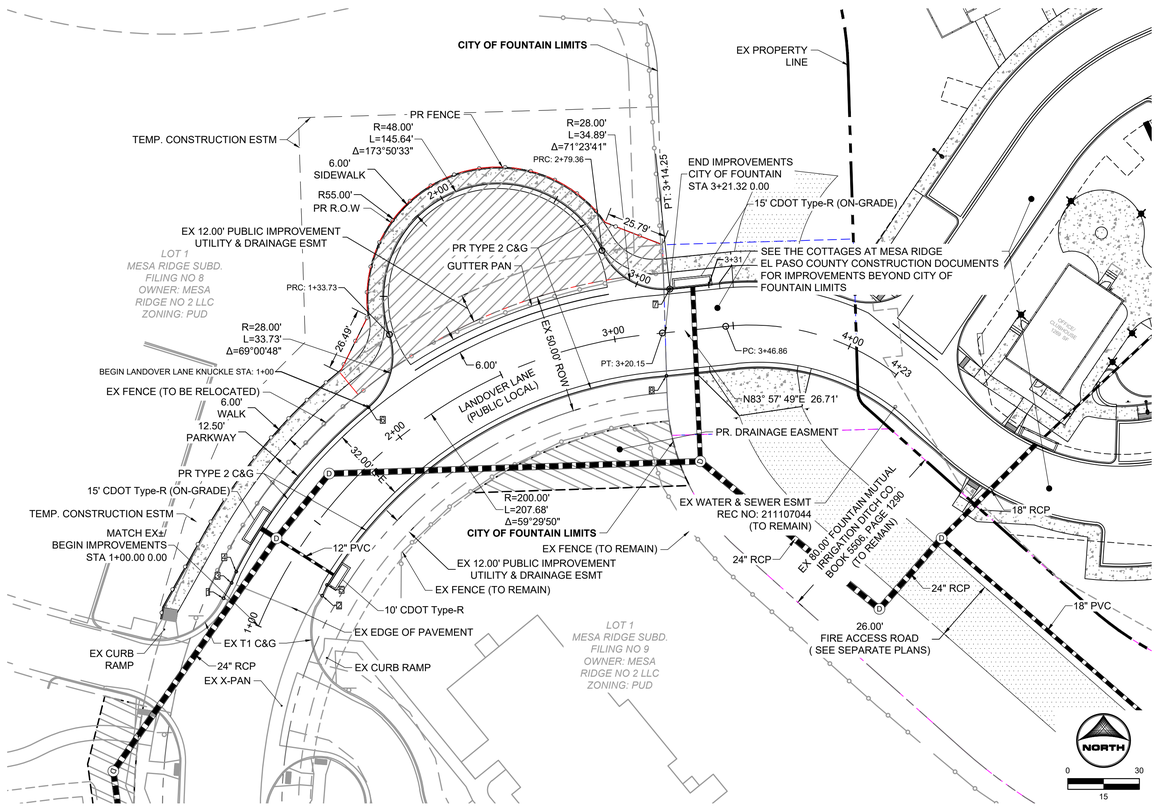
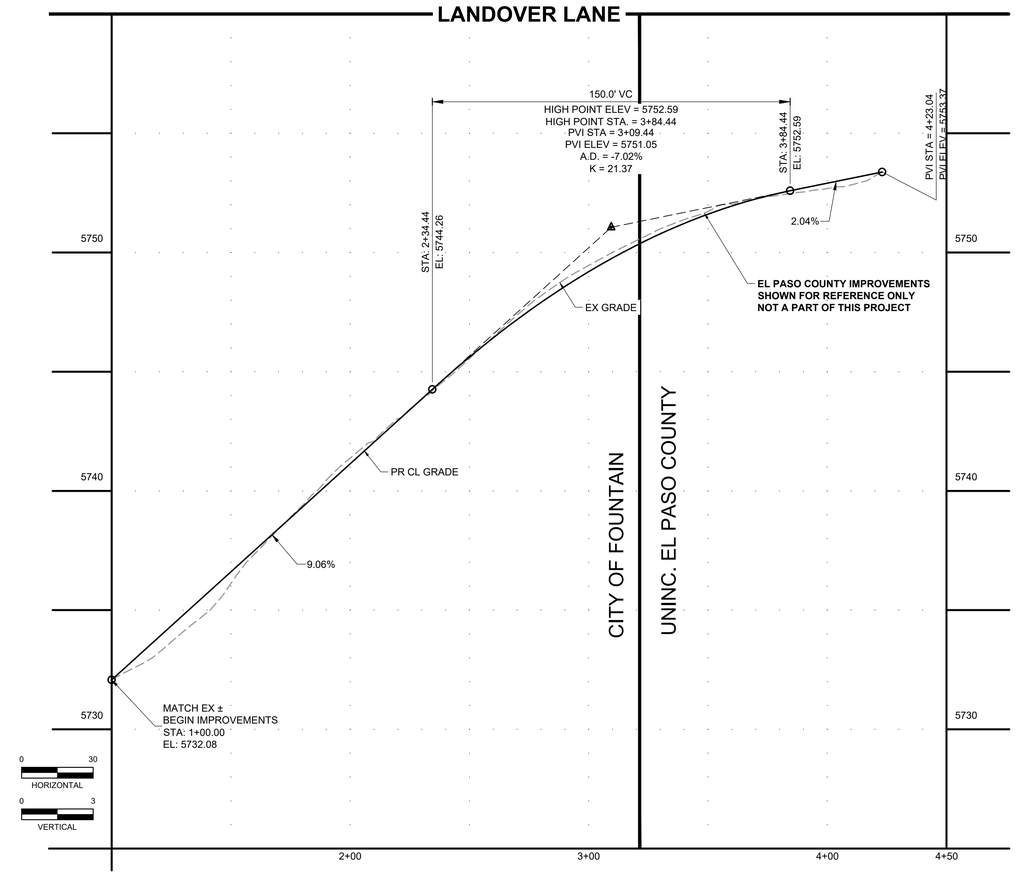
GOODWIN KNIGHT
FOUNTAIN, COLORADO

GOODWIN KNIGHT

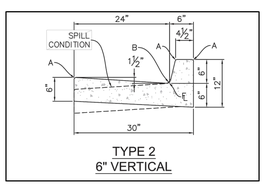
CITY OF FOUNTAIN CONSTRUCTION DOCUMENTS
GEC - INTERIM-FINAL PLAN

SHEET
GEC
6



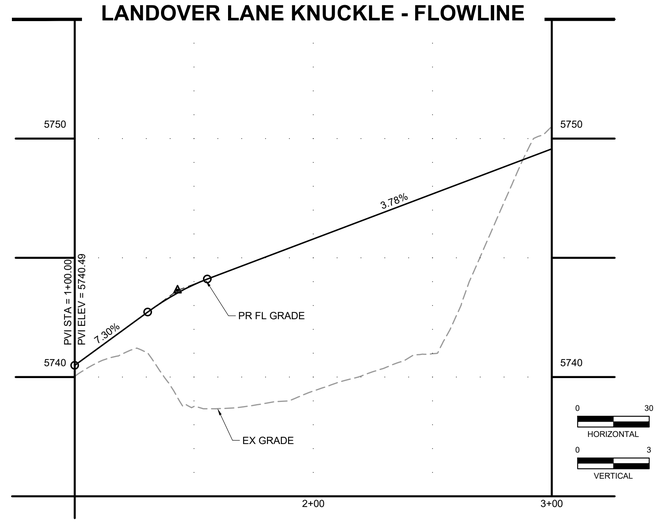


POINT TABLE					
No.	DESC.	ALIGNMENT	STATION	OFFSET	FL EL.
1	MATCH EX±/BEGIN T2 C&G	Landover Lane	STA 1+04.69	18.0' L	5732.01
2	MATCH EX±/BEGIN T2 C&G	Landover Lane	STA 1+24.25	18.5' R	5733.76
3	PI	Landover Lane	STA 1+11.37	17.6' L	5732.17
4	PC	Landover Lane	STA 1+16.04	18.0' L	5732.63
5	PC	Landover Lane	STA 1+29.70	18.0' R	5734.33
6	PRC	Landover Lane	STA 1+97.79	18.0' L	5740.56
7	PT/END T2 C&G	Landover Lane	STA 3+25.20	18.0' L	5750.11
8	END TYPE 2 C&G	Landover Lane	STA 3+20.15	18.0' R	5749.90

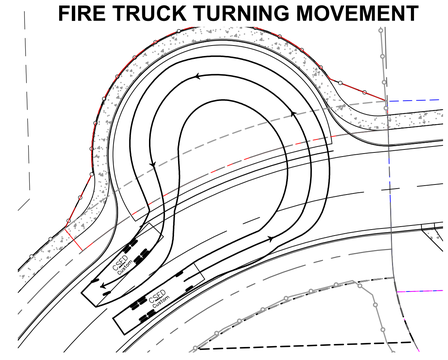


TYPE 2
6" VERTICAL

LANDOVER LANE KNUCKLE - FLOWLINE



LANDOVER LANE KNUCKLE - FIRE TRUCK TURNING MOVEMENT



ENGINEER'S STATEMENT:

SIGNATURE (AFFIX SEAL): _____ DATE: _____

COLORADO PROFESSIONAL ENGINEER NO:_____

ACCEPTANCE:

THESE PLAN SUBMITTED APPEAR TO BE IN CONFORMANCE WITH THE CITY OF FOUNTAIN SUBMITTAL REQUIREMENTS AND STANDARD ENGINEERING PRINCIPLES AND PRACTICES APPEAR TO HAVE BEEN FOLLOWED. THE PROFESSIONAL ENGINEER SUBMITTED AND SEALING THE PLANS IS SOLELY RESPONSIBLY FOR THEIR ACCURACY AND VALIDITY. THE REVIEW IS ONLY VALID FOR ONE (1) YEAR FROM THE DATE BELOW.

NOT FOR CONSTRUCTION

BRANDY R WILLIAMS, P.E., CITY ENGINEER DATE: _____

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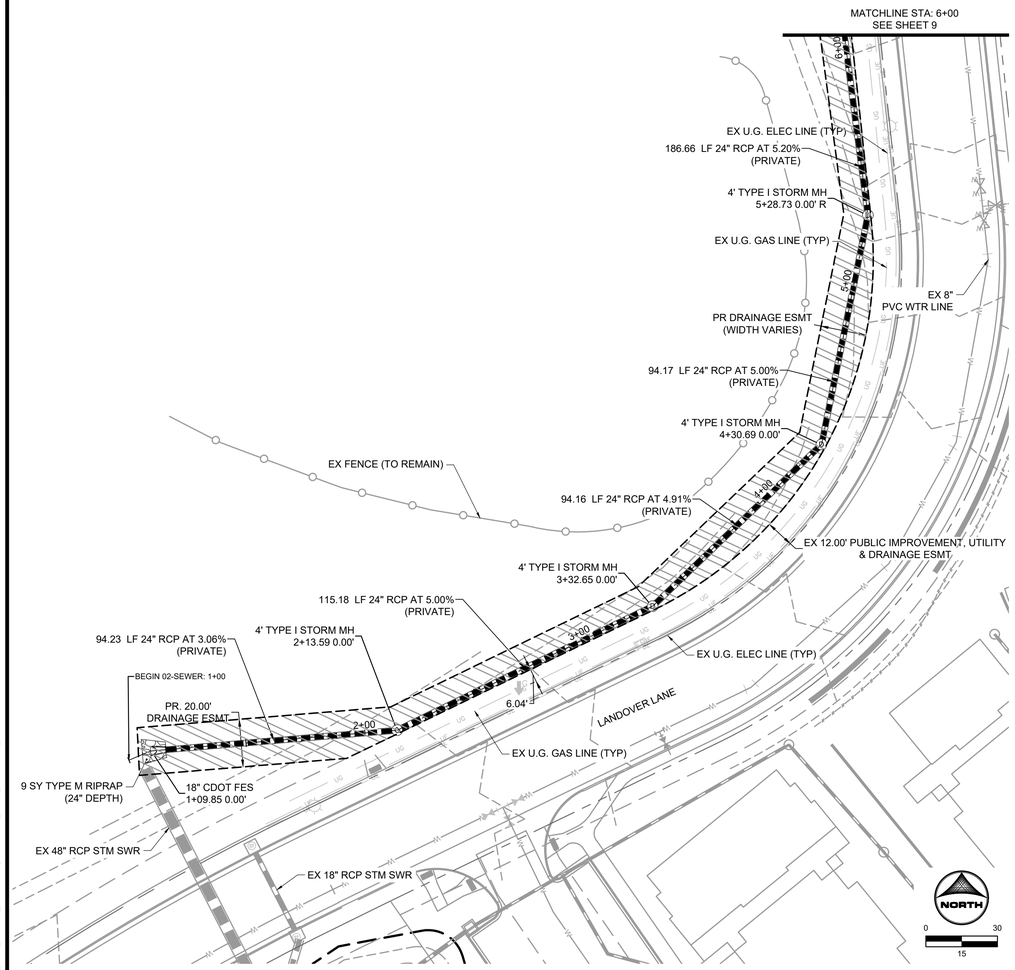
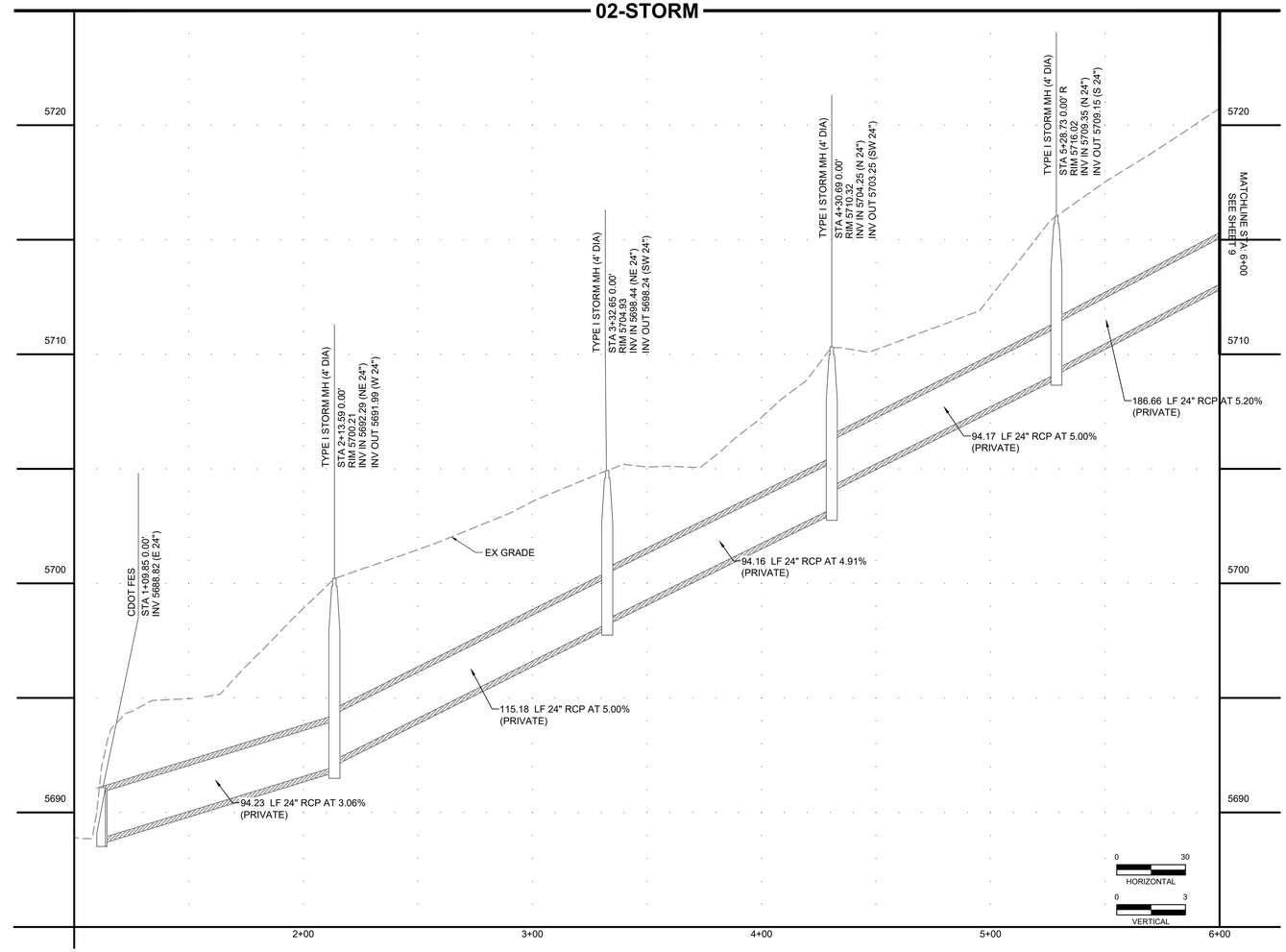
CITY OF FOUNTAIN CONSTRUCTION DOCUMENTS
LANDOVER LANE - PLAN & PROFILE

SHEET RD 7





STORM SEWER CONSTRUCTION NOTES:

1. ALL RCP STORM SEWER TO BE CLASS III UNLESS OTHERWISE NOTED.
2. CONTRACTOR SHALL POTHOLE AND VERIFY DEPTH OF EXISTING UTILITY PRIOR TO THE START OF CONSTRUCTION. IF CONFLICTS ARE IDENTIFIED THE CONTRACTOR SHALL CONTACT THE ENGINEER IMMEDIATELY.

DETAILED DRAINAGE CONSTRUCTION PLANS AND SPECIFICATIONS ENGINEER'S STATEMENT:

THESE DETAILED PLANS AND SPECIFICATIONS WERE PREPARED UNDER MY DIRECT SUPERVISION. SAID DETAILED PLANS AND SPECIFICATIONS HAVE BEEN PREPARED ACCORDING TO THE ESTABLISHED CRITERIA FOR DETAILED DRAINAGE PLANS AND SPECIFICATIONS, AND SAID DETAILED PLANS AND SPECIFICATIONS ARE IN CONFORMITY WITH THE MASTER PLAN OF THE DRAINAGE BASIN. SAID DRAINAGE PLANS AND SPECIFICATIONS MEET THE PURPOSES FOR WHICH THE PARTICULAR DRAINAGE FACILITY(S) IS DESIGNED. I ACCEPT RESPONSIBILITY FOR ANY LIABILITY CAUSED BY ANY NEGLIGENT ACTS, ERRORS OR OMISSIONS ON MY PART IN PREPARATION OF THE DETAILED PLANS AND SPECIFICATIONS.

SIGNATURE (AFFIX SEAL): _____ DATE: _____

COLORADO PROFESSIONAL ENGINEER NO:_____

CITY OF FOUNTAIN DETAILED DRAINAGE CONSTRUCTION PLANS AND SPECIFICATIONS REVIEW:

PLAN REVIEW BY THE CITY OF FOUNTAIN IS PROVIDED ONLY FOR GENERAL CONFORMANCE WITH THE DESIGN CRITERIA. THE CITY OF FOUNTAIN IS NOT RESPONSIBLE FOR THE ACCURACY AND ADEQUACY OF THE DESIGN, DIMENSIONS, AND/OR ELEVATIONS WHICH SHALL BE CONFIRMED AT THE JOB SITE. THE CITY OF FOUNTAIN, THROUGH THE APPROVAL OF THIS DOCUMENT, ASSUMED NO RESPONSIBILITY FOR COMPLETENESS AND/OR ACCURACY OF THIS DOCUMENT.

BRANDY R WILLIAMS, P.E., CITY ENGINEER DATE:

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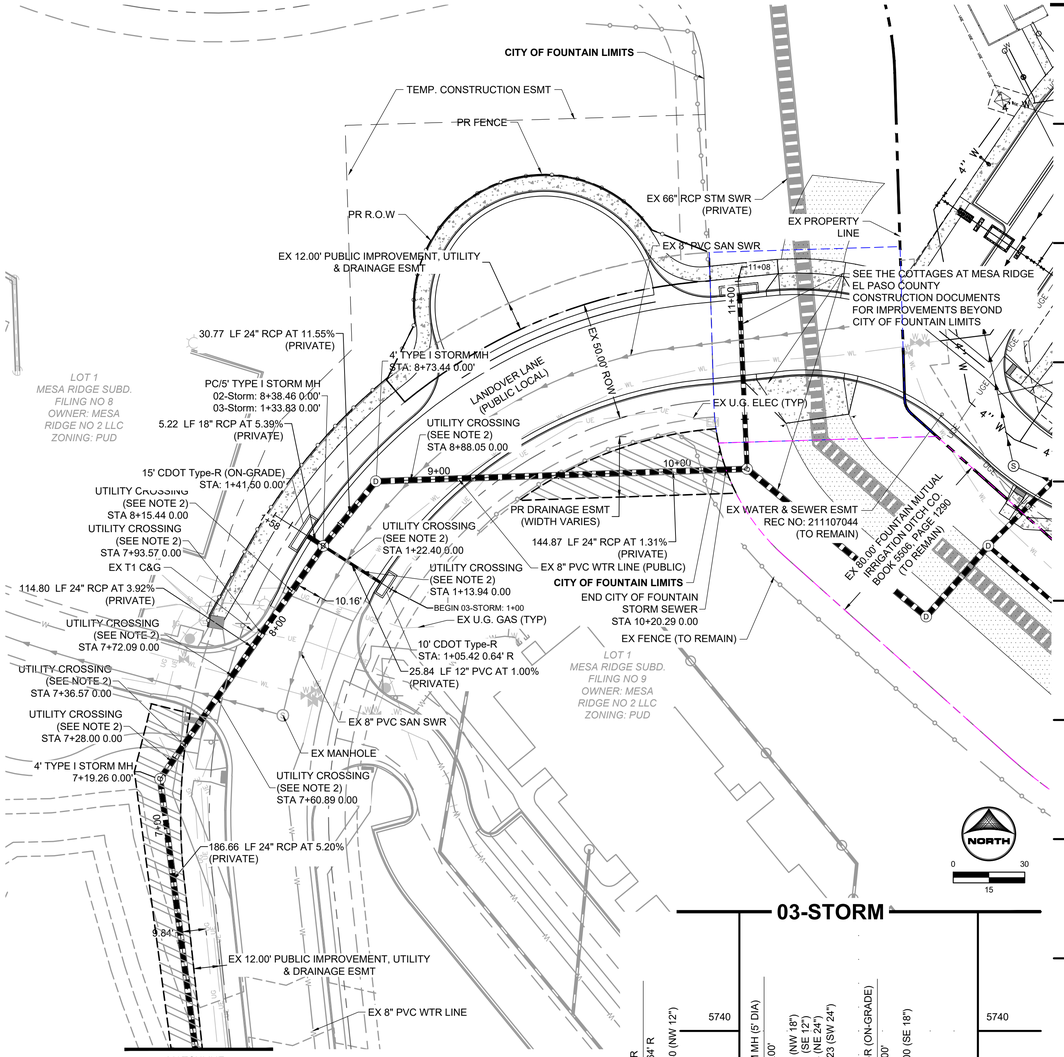
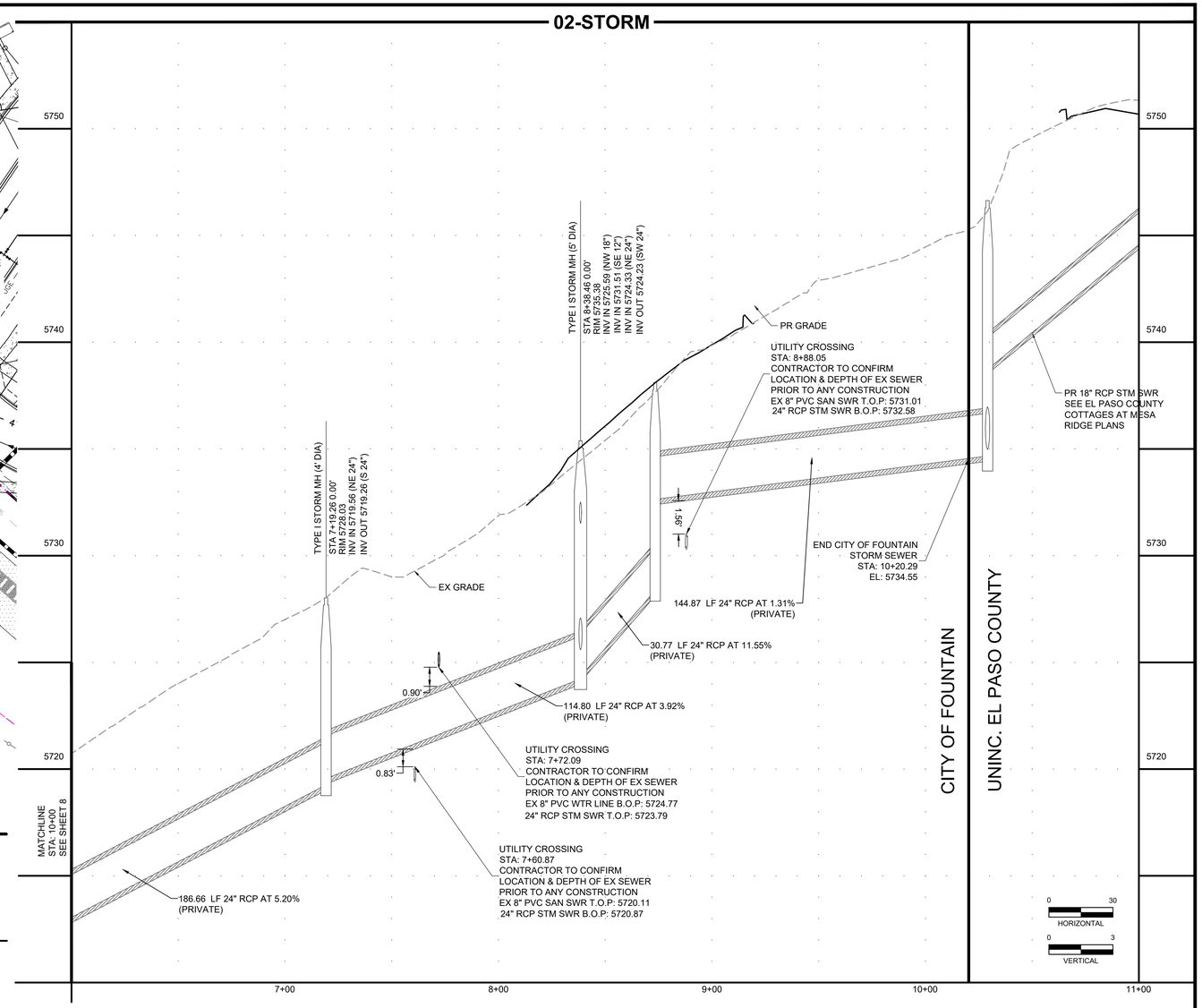
CITY OF FOUNTAIN CONSTRUCTION DOCUMENTS
STORM PLAN & PROFILE

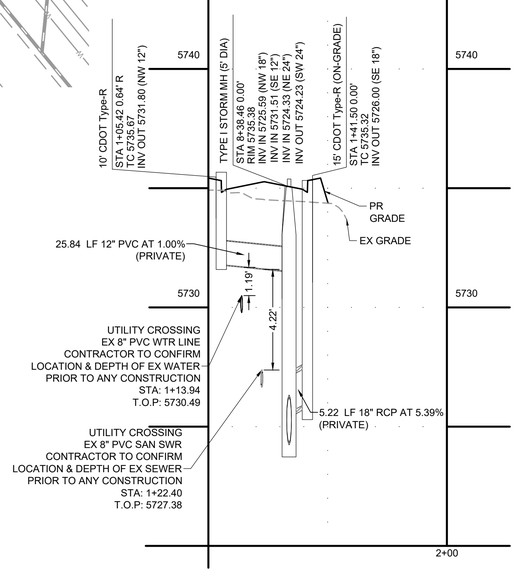
SHEET
STM
8



02-STORM



03-STORM



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ENGINEER'S STATEMENT:

SIGNATURE (AFFIX SEAL): _____ DATE: _____

COLORADO PROFESSIONAL ENGINEER NO:_____

ACCEPTANCE:

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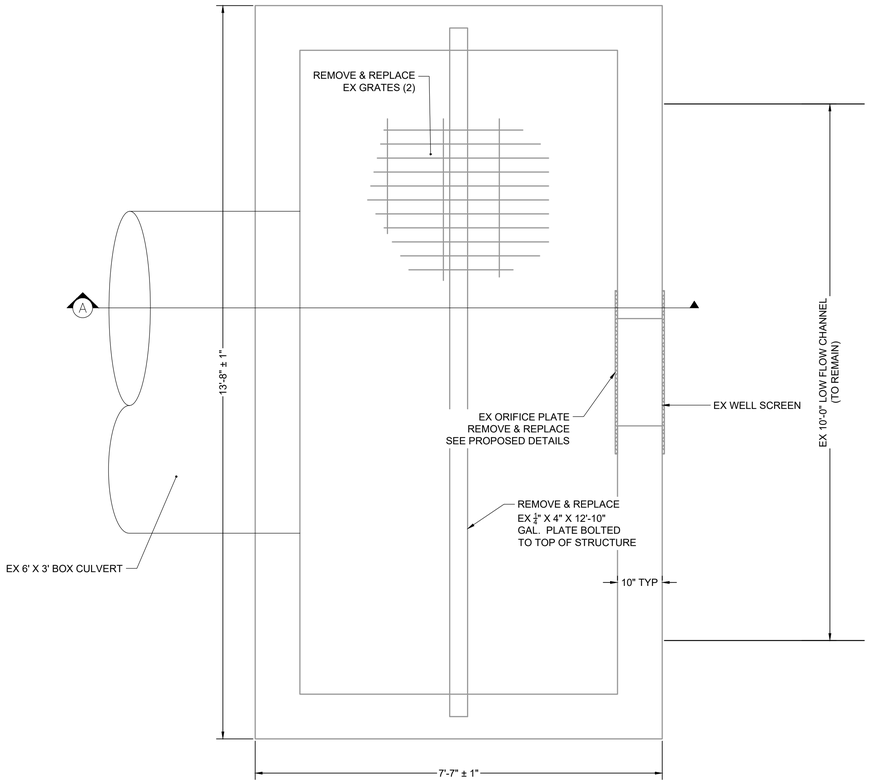
GOODWIN KNIGHT

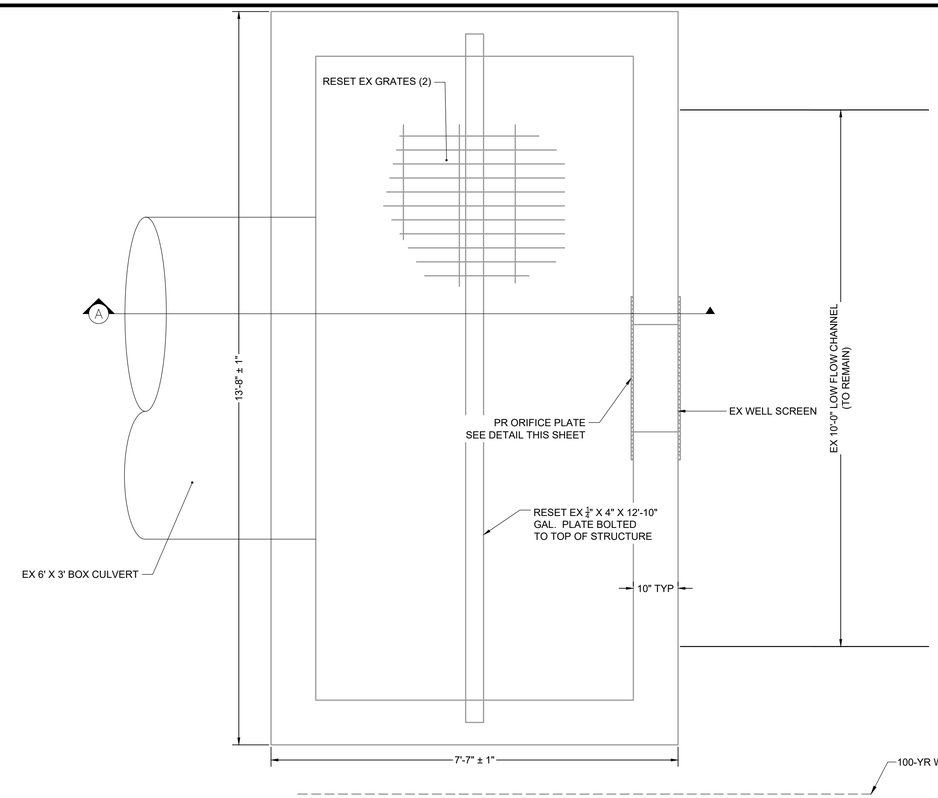
CITY OF FOUNTAIN CONSTRUCTION DOCUMENTS

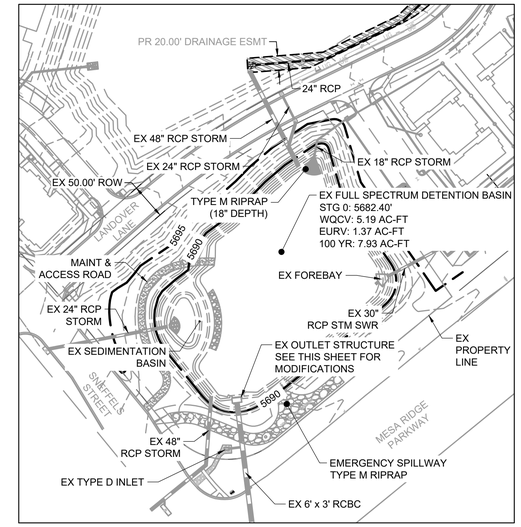
STORM PLAN & PROFILE

SHEET STM 9

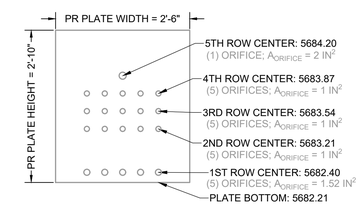


PLAN VIEW
EX POND OUTLET STRUCTURE PLAN
SCALE: 3/4" = 1'

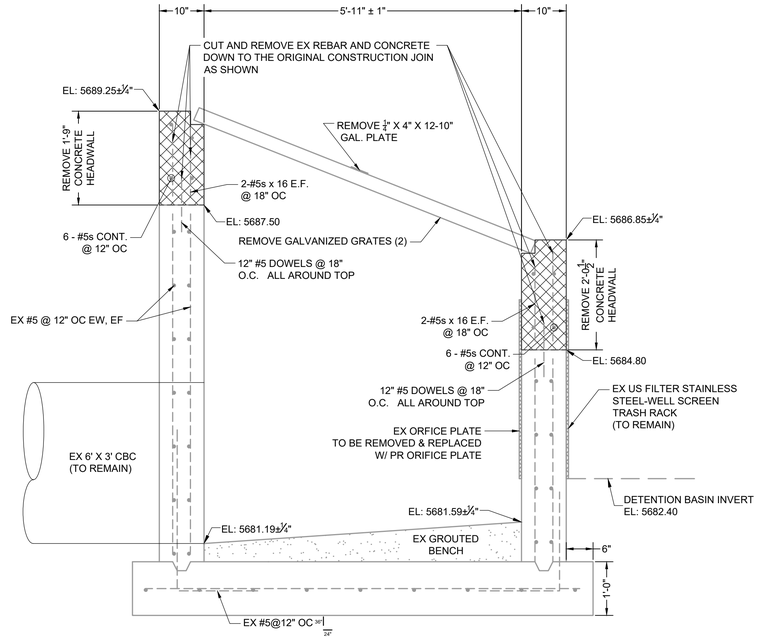




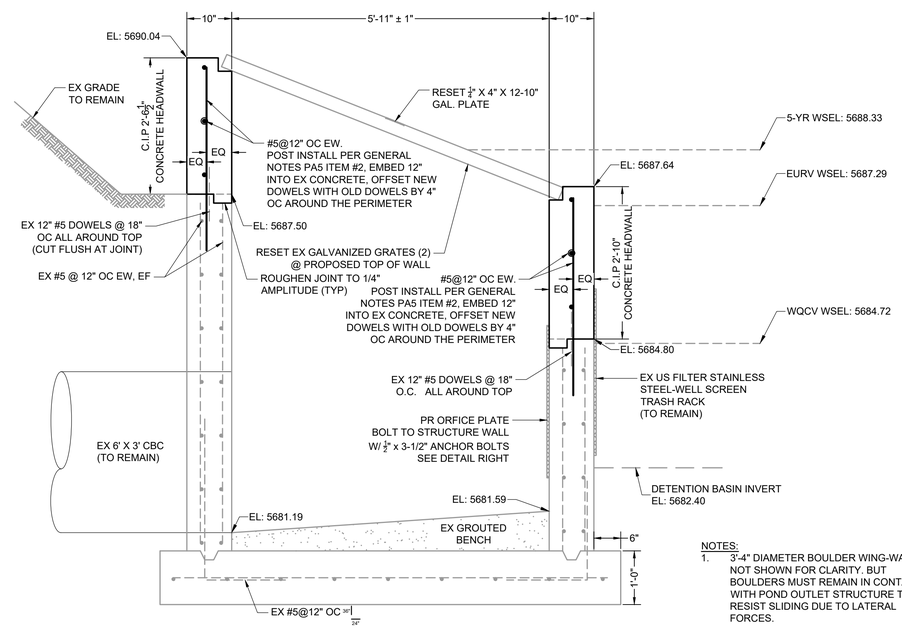
VICINITY MAP
SCALE: 1" = 100'



ELEVATION VIEW
PROPOSED ORIFICE PLATE
SCALE: 3/4" = 1'



SECTION A – PROFILE VIEW
EX POND OUTLET STRUCTURE – DEMO PLAN
SCALE: 3/4" = 1'



SECTION A – PROFILE VIEW
POND OUTLET STRUCTURE MODIFICATIONS
SCALE: 3/4" = 1'

NOTES:
1. 3'-4" DIAMETER BOULDER WING-WALLS NOT SHOWN FOR CLARITY. BUT BOULDERS MUST REMAIN IN CONTACT WITH POND OUTLET STRUCTURE TO RESIST SLIDING DUE TO LATERAL FORCES.

NOT FOR CONSTRUCTION

SCALE:
3/4" = 1'

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CITY OF FOUNTAIN CONSTRUCTION DOCUMENTS
OUTLET STRUCTURE MODIFICATION PLAN

SHEET
DT

10

GENERAL STRUCTURAL NOTES:

G1. SCOPE
THE NOTES ON THIS SHEET AND DETAILS ON THIS SHEET ARE TYPICAL AND APPLY TO ALL CONCRETE POND STRUCTURES WHETHER SPECIFICALLY CALLED OUT OR NOT, EXCEPT WHERE THERE ARE SPECIFIC INDICATIONS TO THE CONTRARY ON STRUCTURAL SHEETS IF THERE ARE QUESTIONS, THEY SHALL BE SUBMITTED TO THE STRUCTURAL ENGINEER AND ANSWERED IN WRITING PRIOR TO CONSTRUCTION.

G2. APPLICABLE SPECIFICATIONS AND CODE
A. COLORADO BUILDING CODE 2021: 2021 INTERNATIONAL BUILDING CODE WITH AMENDMENTS.
B. ACI 350-20
C. ACI 318-19
D. AISC STEEL MANUAL 15TH EDITION
E. AWS D1.1 - STRUCTURAL WELDING CODE - STEEL
F. ASCE - 7-16 MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES

G3. DESIGN CRITERIA
APPLIES TO ALL STRUCTURES (UNO)

1.	DEAD LOAD:	
1.1.1.	ACTUAL TRIBUTARY STRUCTURE WEIGHT	
2.	LIVE LOAD:	
2.1.1.	WALKWAYS, STAIRS, GRATING	100 PSF
3.	WIND:	
3.1.1.	BASIC WIND SPEED (ULTIMATE):	SPECIAL REGION
3.1.2.	EXPOSURE:	C
3.1.3.	IMPORTANCE FACTOR, Iw:	1.0
3.1.4.	RISK CATEGORY:	II
4.	SEISMIC:	
4.1.	ABOVE GRADE STRUCTURES AND BELOW GRADE WATER BEARING STRUCTURES:	
4.1.1.	RISK CATEGORY:	II
4.1.2.	IMPORTANCE FACTOR, Ie:	1.00
4.1.3.	SPECTRAL RESPONSE ACCELERATION, SS:	0.186
4.1.4.	SPECTRAL RESPONSE ACCELERATION, S1:	0.057
4.1.4.1.	SITE CLASS:	D
4.1.4.2.	SEISMIC DESIGN CATEGORY:	B
4.1.4.3.	SPECTRAL RESPONSE COEFFICIENT, SDS:	0.199
4.1.4.4.	SPECTRAL RESPONSE COEFFICIENT, SD1:	0.09
5.	SNOW LOAD:	
5.1.	GROUND SNOW LOAD, Pg:	SPECIAL REGION
6.	HYDROSTATIC LOAD:	63 PSF / FT

G4. THE FOLLOWING GEOTECHNICAL VALUES IN SECTION G5 ARE THE BASIS OF THIS STRUCTURAL DESIGN. CONTRACTOR MUST VERIFY THE REQUIRED VALUES COMPLY WITH THE SOILS ADJACENT AND UNDERNEATH THE STRUCTURES. THIS MUST BE VALIDATED WITH A SITE GEOTECHNICAL REPORT AND/OR LOCAL GEOTECHNICAL INSPECTION FOR EACH STRUCTURE. DO NOT BEAR FOUNDATIONS ON UNSUITABLE FILL INCLUDING, BUT NOT LIMITED TO: MUD, ORGANIC SILT, ORGANIC CLAYS, PEAT, UNPREPARED FILL, OR EXPANSIVE SOILS. VALIDATE SUITABLE SUBGRADE WITH GEOTECHNICAL FIRM. OVEREXCAVATE AND REPLACE WITH SUITABLE STRUCTURAL FILL AS DIRECTED BY THE GEOTECHNICAL FIRM. ALL GEOTECHNICAL WORK MUST BE PERFORMED BY A GEOTECHNICAL ENGINEER LICENSED WITHIN THE STATE OF COLORADO.
1. REFERENCE SITE GEOTECHNICAL REPORT: ENTECH ENGINEERING, INC; JOB NO. 211100: DATED DECEMBER 22, 2021. FOLLOW ALL GEOTECHNICAL RECOMMENDATIONS. IN THE EVENT OF CONFLICT WITH DESIGN DOCUMENTS THEN FOLLOW THE MOST STRINGENT DESIGN CRITERIA AND VERIFY WITH ENGINEER IN WRITING PER NOTE G1.

G5. SOIL CHARACTERISTICS

1.	NET ALLOWABLE SOIL BEARING CAPACITY:	1,500 PSF (MIN)
2.	ALLOWABLE LATERAL EARTH PRESSURE (EFP):	115 PSF (MAX) / FT (SAT)
3.	ALLOWABLE LATERAL HYDROSTATIC PRESSURE:	63 PSF / FT
4.	SOIL UNIT WEIGHT:	120 PCF
5.	ALL BACKFILL ADJACENT TO AND UNDERNEATH STRUCTURES MUST BE:	CDOT CLASS 6 AGG BASE
6.	ALL BACKFILL UNDERNEATH STRUCTURES MUST BE COMPACTED TO:	98% STANDARD PROCTOR
7.	ALL BACKFILL ADJACENT TO STRUCTURES MUST BE COMPACTED TO:	95% STANDARD PROCTOR
8.	MAXIMUM BACKFILL LIFT HEIGHT:	8"

G6. SAFETY
SAFETY AND STRUCTURE STABILITY DURING CONSTRUCTION ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. STRUCTURES HAVE BEEN DESIGNED TO RESIST THE DESIGN LIVE LOADS ONLY AS A COMPLETED STRUCTURE. CONTRACTOR MUST LOCATE ALL UNDERGROUND UTILITIES, PER OSHA REQUIREMENTS, TO ENSURE ALL UTILITIES ARE NOT DAMAGED.

G7. DO NOT BACKFILL AGAINST WALLS PRIOR TO GROUND LEVEL CONCRETE FRAMING AND SLAB HAVE REACHED THEIR 28-DAY DESIGN STRENGTH.

G8. OPENINGS
OPENINGS FOR PIPES, DUCTS, CONDUITS, ETC, ARE NOT ALL SHOWN ON THE STRUCTURAL DRAWINGS. COORDINATE AND PROVIDE OPENINGS AS REQUIRED TO ACCOMMODATE ALL WORK SHOWN OR SPECIFIED IN THE CONTRACT DOCUMENTS AND OTHERWISE REQUIRED FOR THE FURNISHING OF A FUNCTIONALLY COMPLETE PROJECT. REINFORCE AROUND OPENINGS PER STANDARD STRUCTURAL DETAILS.

G9. SPECIAL INSPECTIONS
THE FOLLOWING SPECIAL STRUCTURAL INSPECTIONS SHALL BE PERFORMED IN ACCORDANCE WITH CHAPTER 17 OF THE 2021 INTERNATIONAL BUILDING CODE AND THE SPECIFICATIONS. THE CONTRACTOR SHALL NOTIFY AND ACCOMMODATE THE APPLICABLE INSPECTOR DURING APPROPRIATE PHASES OF THE WORK AS REQUIRED BY EACH INSPECTION.

STRUCTURAL FILL PLACEMENT, EXISTING SITE CONDITIONS PER IBC TABLE 1704.7.
CONCRETE, REINFORCING STEEL AND BOLTS INSTALLED IN CONCRETE PER IBC TABLE 1704.4.
CONTINUOUS CONCRETE PLACEMENT AND CURING PER IBC TABLE 1704.4.
CONCRETE ROUGHEN AND KEYED CONSTRUCTION JOINTS
EXPANSION ANCHORS AND ADHESIVE BOLT / DOWEL / ROD INSTALLATION

G10. TYPICAL DETAILS
THE TYPICAL DETAILS DEPICT TYPICAL DETAILING TO BE USED ON THIS PROJECT. IF CONDITIONS ARE NOT EXPLICITLY SHOWN ON THE DRAWINGS THEY SHALL BE MADE SIMILAR TO THE TYPICAL DETAILS. OBTAIN APPROVAL OF ENGINEER IN WRITING FOR SIMILAR CONDITIONS PRIOR TO CONSTRUCTION.

G11. THE CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS AND ELEVATIONS OF EXISTING CONSTRUCTION AS REQUIRED TO COORDINATE NEW CONSTRUCTION. SUBMIT REQUIRED CHANGES FOR APPROVAL.

CONCRETE
C1. DESIGN STRENGTHS:
CONCRETE
GENERAL USE STRUCTURAL CONCRETE: F'c = 4,500 PSI

REINFORCING
Fy = 60,000 PSI

C2. CONCRETE MATERIAL SCHEDULE
1. GENERAL USE STRUCTURAL CONCRETE:

PORTLAND CEMENT - ASTM C150:	TYPE I/II
FLY ASH - ASTM C618:	15% MAX
AGGREGATE - COARSE - ASTM C33:	1" MAX
AIR ENTRAINMENT - ASTM C260:	6% ± 1%
SUPERPLASTICIZER - ASTM C494:	TYPE F
WATER TO CEMENT RATIO - MAXIMUM:	0.42
SLUMP:	2"-4"
PLACEMENT BY PUMP:	
AT PUMP:	2"-6"
AT DISCHARGE OF LINE:	1"-4"

C3. CONCRETE COVER
FOR CAST-IN-PLACE CONCRETE, PROVIDE CONCRETE COVER FOR REINFORCING AS FOLLOWS, UNLESS NOTED OTHERWISE:

CONCRETE DEPOSITED AGAINST EARTH:	3"
ALL OTHER:	2"

SEE DRAWINGS FOR EXCEPTIONS.

C4. REINFORCING PLACEMENT REQUIREMENTS TO BE WITH ACI 117 TOLERANCES.

C5. REFER TO OTHER DISCIPLINE DRAWINGS PRIOR TO CONSTRUCTION FOR EMBEDDED ITEMS AND PENETRATIONS NOT SHOWN ON STRUCTURAL DRAWINGS. AS REQUIRED TO ACCOMMODATE ALL WORK SHOWN OR SPECIFIED IN THE CONTRACT DOCUMENTS AND OTHERWISE REQUIRED FOR THE FURNISHING OF A FUNCTIONALLY COMPLETE PROJECT. REINFORCE AROUND OPENINGS PER STANDARD STRUCTURAL DETAILS UNLESS OTHERWISE SHOWN.

C6. PROVIDE 3/4" CHAMFERS AT ALL EXPOSED EDGES UNLESS NOTED OTHERWISE. NOT ALL CHAMFERS MAY BE SHOWN ON DRAWINGS.

C7. FIELD ADJUST REINFORCING AT OPENINGS AND EMBEDDED ITEMS AS INDICATED.

C8. ANCHOR BOLTS NOT SPECIFIED BY ENGINEER SHALL BE DESIGNED AND CERTIFIED BY A REGISTERED PROFESSIONAL ENGINEER, RETAINED BY THE CONTRACTOR, IN ACCORDANCE WITH APPLICABLE PROJECT AND CODE REQUIREMENTS. SUBMIT AS A SHOP DRAWING FOR REVIEW AND APPROVAL BY THE ENGINEER. COORDINATE LOCATION, SIZE AND EMBEDMENT PRIOR TO CASTING CONCRETE.

C9. CONTINUOUS WATERSTOP SHALL BE INSTALLED IN JOINTS SUBJECT TO STATIC WATER PRESSURE. ALL WATERSTOPS SHALL BE SELF-ADHERED NON-SWELL STRIP APPLIED WATERSTOP THAT COMPLY WITH FEDERAL SPECIFICATION SS-S-210. SEE TYPICAL DETAILS FOR LOCATIONS.

C10. ABSOLUTELY NO WELDING OF REINFORCING BARS OR TORCHING TO BEND OR CUT REINFORCING BARS SHALL BE ALLOWED.

C11. CONTRACTOR SHALL SUBMIT A CONCRETE PLACEMENT PLAN IDENTIFYING JOINT TYPES, JOINT LOCATIONS AND CONCRETE PLACEMENT SEQUENCE. CONTRACTOR SHALL ALSO SUBMIT "ACI COMPLIANT" CONCRETE MIX DESIGN (WITH HISTORICAL COMPRESSION BREAK RESULTS) AND REBAR SHOP DRAWINGS FOR REVIEW PRIOR TO CONSTRUCTION.

C12. ALL CAST-IN-PLACE AND POST-INSTALLED ANCHORS INDICATED IN THE STRUCTURAL DOCUMENTS SHALL COMPLY WITH APPENDIX D OF ACI 318 AND CHAPTER 19 OF THE IBC. ALL EXPANSION AND ADHESIVE ANCHORS SHALL HAVE THE ICC REPORT SHOWING EQUIVALENT LOAD CAPACITY. SUBMIT AND INSTALL PER THE ICC EVALUATION REPORT.

C13. CONCRETE CYLINDERS MUST BE TAKEN FOR TESTING TO VALIDATE ADEQUATE COMPRESSION STRENGTH. AT LEAST ONE SET OF CYLINDERS SHALL BE TAKEN FOR EACH STRUCTURE. STRUCTURES GREATER THAN 50 CY OF CONCRETE MUST HAVE AN ADDITIONAL SET OF CYLINDER TAKEN FOR EACH ADDITIONAL 50 CY OF CONCRETE. A SET OF CYLINDERS WILL CONSIST OF THREE CYLINDERS TO TEST AT 7-DAY AND 28-DAY; WITH ONE RESERVE CYLINDER TO BE TESTED IF THE 28-DAY TEST IS NOT ADEQUATE. RESULTS OF THE COMPRESSION TESTS MUST BE SUBMITTED FOR OWNER AND ENGINEER REVIEW.

C14. ALL REINFORCING CONTINUOUS THROUGH CONSTRUCTION JOINTS UNLESS NOTED OTHERWISE.

C15. ALL BARS INDICATED AS BEING HOOKED SHALL HAVE AN ACI STANDARD 90 DEGREE OR 180 DEGREE HOOKS AS SHOWN.

C16. CONCRETE PLACEMENT AND CURING MUST FOLLOW ALL APPLICABLE ACI STANDARDS INCLUDING, BUT NOT LIMITED TO ACI 305R "GUIDE TO HOT WEATHER CONCRETING' AND ACI 306.1 "GUIDE TO COLD WEATHER CONCRETING". NO WATER MAY BE ADDED ON SITE UNLESS IT HAS BEEN ACCOUNTED FOR IN THE APPROVED MIX DESIGN SUBMITTAL.

C17. CONCRETE FORMS MUST BE CLEAR OF DEBRIS AND CONCRETE MUST BE PROPERLY VIBRATED DURING PLACEMENT TO PREVENT HONEYCOMBS, CRACKS, DEFLECTS, EMBEDDED DEBRIS, OR VOIDS; AS DEFINED BY ACI CT-13. CONTRACTOR WILL BE REQUIRED TO FIX ALL DEFECTIVE AREAS TO THE SATISFACTION OF THE ENGINEER AND OWNER.

POST-INSTALLED ANCHORS:

PA1. POST-INSTALLED ANCHORS SHALL ONLY BE USED WHERE SPECIFIED ON THE CONTRACT DRAWINGS. THE CONTRACTOR SHALL OBTAIN APPROVAL FROM THE ENGINEER OF RECORD (EOR) BEFORE INSTALLING POST-INSTALLED ANCHORS FOR MISSING OR MISPLACED CAST-IN-PLACE ANCHORS.

PA2. CARE SHALL BE TAKEN IN PLACING POST-INSTALLED ANCHORS TO AVOID CONFLICTS WITH EXISTING REBAR. HOLES SHALL BE DRILLED AND CLEANED IN ACCORDANCE WITH THE MANUFACTURER WRITTEN INSTRUCTIONS.

PA3. SPECIAL INSPECTION SHALL BE PROVIDED FOR ALL ADHESIVE AND MECHANICAL ANCHOR INSTALLATIONS AS REQUIRED BY THE BUILDING CODE. INDEPENDENT ON-SITE PROOF LOAD TESTING SHALL BE PERFORMED AS REQUIRED BY THE EOR. CONTACT THE EOR FOR AMOUNT OF ANCHORS REQUIRED TO BE TESTED AND REQUIRED PROOF LOAD MAGNITUDE.

PA4. SUBSTITUTION REQUESTS, FOR PRODUCTS OTHER THAN THOSE SPECIFIED BELOW, SHALL BE SUBMITTED BY THE CONTRACTOR TO THE EOR ALONG WITH CALCULATIONS THAT ARE PREPARED AND SEALED BY A REGISTERED PROFESSIONAL ENGINEER. THE CALCULATIONS SHALL DEMONSTRATE THAT THE SUBSTITUTED PRODUCT IS CAPABLE OF ACHIEVING THE PERTINENT EQUIVALENT PERFORMANCE VALUES (MINIMUM) OF THE SPECIFIED PRODUCT USING THE APPROPRIATE DESIGN PROCEDURE AND/OR STANDARD(S) AS REQUIRED BY THE BUILDING CODE. PRODUCT ICC-ES REPORTS SHALL BE INCLUDED WITH THE SUBMITTAL PACKAGE.

PA5. UNLESS NOTED OTHERWISE ON PLANS, ACCEPTABLE CONCRETE ANCHOR PRODUCTS SHALL BE:

1. MECHANICAL ANCHORS FOR USE IN CRACKED AND UNCRACKED CONCRETE SHALL HAVE BEEN TESTED AND QUALIFIED FOR USE IN ACCORDANCE WITH ACI 355.2 AND ICC-ES ACI93. PRE-APPROVED MECHANICAL ANCHORS INCLUDE:
1.1. KWIK BOLT TZ (ICC-ES ESR-1917) BY HILTI, INC.
1.2. STRONG BOLT 2 (ICC-ES ESR-3037) BY SIMPSON.
1.3. OR ENGINEER APPROVED EQUAL.

2. ADHESIVE ANCHORS FOR USE IN CRACKED AND UNCRACKED CONCRETE SHALL HAVE BEEN TESTED AND QUALIFIED FOR USE IN ACCORDANCE WITH ICC-ES AC308. PRE-APPROVED ADHESIVE ANCHORS INCLUDE:
2.1. HIT HY-200 (ICC-ES ESR-3187) SYSTEM ADHESIVE ANCHORS BY HILTI.
2.2. SIMPSON SET-3G (ICC-ES ESR-4057) BY SIMPSON STRONG TIE ANCHOR SYSTEMS.
2.3. OR ENGINEER APPROVED EQUAL.

3. CONCRETE SCREW TYPE ANCHORS FOR USE IN CRACKED AND UNCRACKED CONCRETE SHALL HAVE BEEN TESTED AND QUALIFIED FOR USE IN ACCORDANCE WITH ACI 355.2 AND ICC-ES ACI93. PRE-APPROVED SCREW TYPE ANCHORS INCLUDE:
3.1. KWIK HUS-EZ (ICC-ES ESR-3027) BY HILTI, INC.
3.2. TITEN HD (ICC-ES ESR-2713) BY SIMPSON STRONG TIE ANCHOR SYSTEMS.
3.3. OR ENGINEER APPROVED EQUAL.

STEEL:

S1. ALL STEEL SHALL BE HOT DIP GALVANIZED, UNLESS NOTED OTHERWISE.
S2. STEEL SHAPES SHALL CONFORM TO THE FOLLOWING REQUIREMENTS:
1. W-SHAPES & WT-SHAPES: ASTM A992
2. S-SHAPES, CHANNELS, ANGLES & PLATES: ASTM A36
3. SMOOTH & THREADED RODS: ASTM A36
4. HSS-SHAPES: ASTM A500 GR. B
5. PIPE: ASTM A53 GR. B
6. HIGH-STRENGTH STRUCTURAL BOLTS: ASTM A325
7. HARDENED WASHERS: ASTM F436
8. HEAVY HEX NUTS: ASTM F594
9. SHEAR STUDS AND HEADED STUDS: ASTM A108 GR, 1015 TO102.
S3. STEEL WELDS SHALL BE E70XX ELECTRODES, UNLESS NOTED OTHERWISE.
S4. GUARDRAIL MUST BE DESIGNED AND DETAILED BY THE FABRICATOR TO MEET OSHA REQUIREMENTS.

REINF LAP SPLICE TABLE – CONCRETE						HOOKS
BAR SIZE	CONDITION 1: CLEAR COVER >= 2 DIA. AND C–TO–C SPACING >= 5 DIA.		CONDITION 2: CLEAR COVER >= 1 DIA. AND C–TO–C SPACING >= 3 DIA.		CONDITION 3: NEITHER CONDITION 1 NOR 2 IS MET	STANDARD 90 DEGREE HOOK LENGTH
	TOP (SEE NOTE 2)	OTHER	TOP (SEE NOTE 2)	OTHER	ALL BARS	
#3	1'–4"	1'–4"	2'–0"	1'–6"	SEE NOTE 3	0'–6"
#4	1'–7"	1'–4"	2'–8"	2'–1"		0'–8"
#5	2'–0"	1'–6"	3'–4"	2'–8"		0'–10"
#6	2'–6"	1'–10"	4'–0"	3'–1"		1'–0"
#7	3'–6"	2'–9"	5'–10"	4'–7"		1'–2"
#8	4'–0"	3'–1"	6'–8"	5'–2"		1'–4"
#9	4'–6"	3'–6"	7'–7"	5'–10"		1'–7"
#10	5'–1"	3'–11"	8'–6"	6'–6"		1'–10"
#11	5'–8"	4'–4"	9'–5"	7'–4"		2'–0"

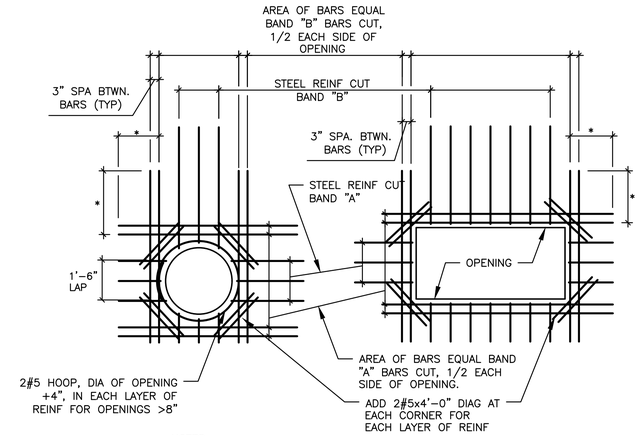
NOTES:
1. BAR COVER AND SPACING MUST BOTH MEET THE CRITERIA OF CONDITION 1 OR 2 IN ORDER TO USE THAT PARTICULAR LAP LENGTH.

2. TOP BARS SHALL BE DEFINED AS ANY HORIZONTAL BARS PLACED SUCH THAT MORE THAN 12" OF FRESH CONCRETE IS CAST IN THE MEMBER BELOW THE BAR IN ANY SINGLE POUR. HORIZONTAL WALL BARS ARE CONSIDERED TOP BARS.

3. FOR BARS THAT DO NOT SATISFY EITHER CONDITION, LAP LENGTH SHALL BE THE LENGTH FROM THE APPROPRIATE CATEGORY ("TOP" OR "OTHER") OF CONDITION 2 MULTIPLIED BY 1.5

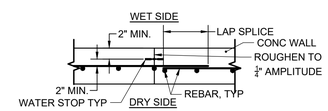
4. FOR EPOXY–COATED BARS, MULTIPLY FINAL LAP LENGTH BY 1.5.

TABLE
TYPICAL REINFORCEMENT SPLICE AND HOOK TABLE
SCALE: NOT TO SCALE

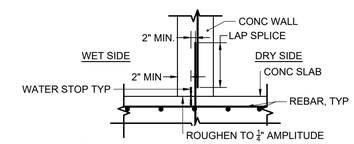


NOTES:
1. * TOP BAR LAP LENGTH–CONDITION #2, UNLESS NOTED OTHERWISE ON PLANS.
2. DO NOT WELD REINF TO PIPE SLEEVES AND INSERTS.
3. TYP FOR ALL OPENING IN CONCRETE WALLS AND SLABS UNLESS INDICATED OTHERWISE ON PLANS.
4. COORDINATE WALL OPENINGS WITH ALL DISCIPLINES.

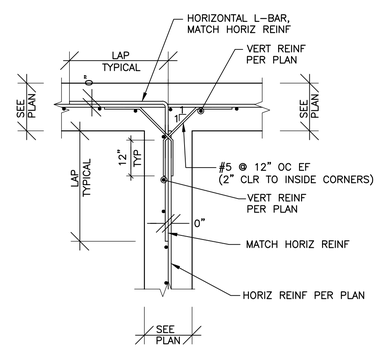
SECTION VIEW
TYPICAL SLAB/WALL OPENING REINFORCEMENT
SCALE: NOT TO SCALE



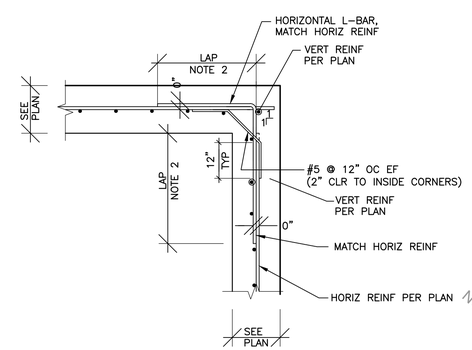
SECTION VIEW – SINGLE LAYER REINFORCMENT
TYP WALL CONSTRUCTION JOINT
SCALE: NOT TO SCALE



SECTION VIEW – SINGLE LAYER REINFORCMENT
TYP SLAB–TO–WALL CONST JOINT
SCALE: NOT TO SCALE



SECTION VIEW – SINGLE LAYER REINFORCMENT
TYPICAL WALL TEE INTERSECTION REBAR
SCALE: NOT TO SCALE



SECTION VIEW – SINGLE LAYER REINFORCMENT
TYPICAL WALL CORNER INTERSECTION REBAR
SCALE: NOT TO SCALE

NOT FOR CONSTRUCTION

DRAWN BY: NQJ	JOB DATE: 8/22/2022	BAR IS ONE INCH ON OFFICIAL DRAWINGS. 0 1"	
APPROVED: KMH	JOB NUMBER: 200541	IF NOT ONE INCH, ADJUST SCALE ACCORDINGLY.	
CAD DATE: 8/22/2022			
CAD FILE: J:\2020\200541\CAD\Dwgs\C\CD\C.O.F\Outlet_Structure_Details			

NO.	DATE	BY	REVISION DESCRIPTION

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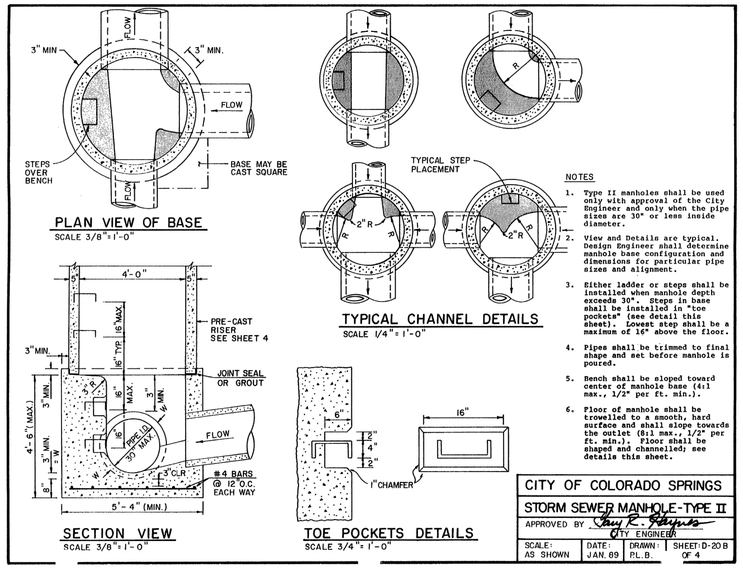
GOODWIN KNIGHT

CITY OF FOUNTAIN CONSTRUCTION DOCUMENTS
STRUCTURAL NOTES & DETAILS

SHEET DT

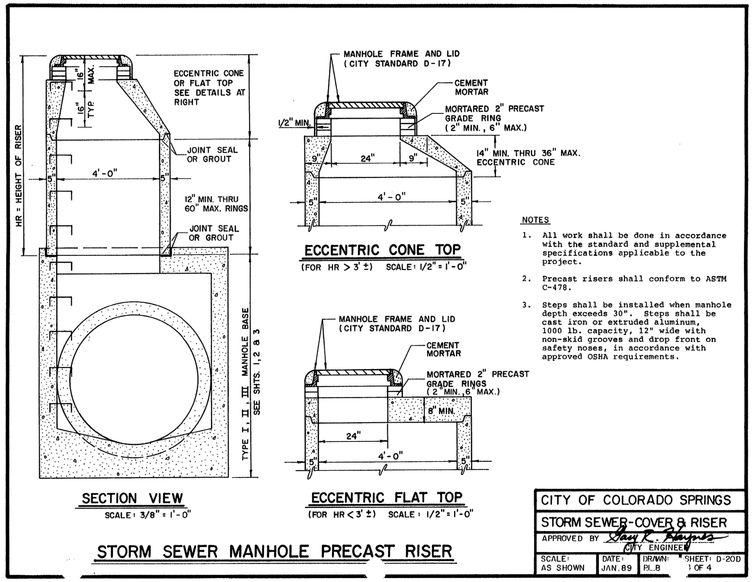


NOTES

1. Type II manholes shall be used only with approval of the City Engineer and only when the pipe sizes are 30" or less inside diameter.
2. View and Details are typical. Design Engineer shall determine manhole base configuration and dimensions for particular pipe sizes and alignment.
3. Either ladder or steps shall be installed when manhole depth exceeds 30". Steps in base shall be installed in "toe pockets" (see detail this sheet). Lowest step shall be a maximum of 16" above the floor.
4. Pipes shall be trimmed to final shape and set before manhole is poured.
5. Bench shall be sloped toward center of manhole base (4:1 max., 1/2" per ft. min.).
6. Floor of manhole shall be trowelled to a smooth, hard surface and shall slope towards the outlet (8:1 max., 1/2" per ft. min.). Floor shall be shaped and channeled; see details this sheet.

CITY OF COLORADO SPRINGS
STORM SEWER MANHOLE-TYPE II
APPROVED BY Gary R. Phipps CITY ENGINEER

SCALE:	DATE:	DRAWN:	SHEET: D-20 B
AS SHOWN	JAN. 89	P.L.B.	OF 4



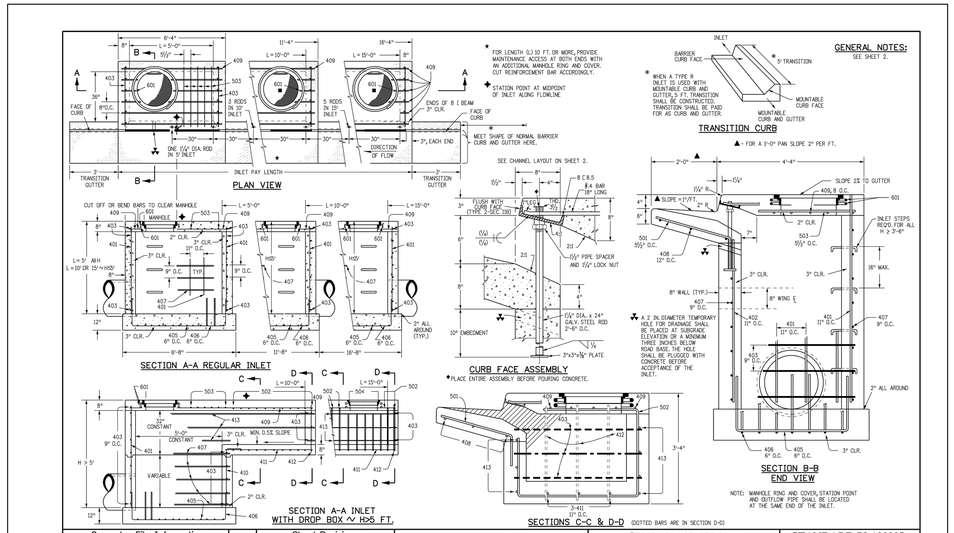
NOTES

1. All work shall be done in accordance with the standard and supplemental specifications applicable to the project.
2. Precast risers shall conform to ASTM C-478.
3. Steps shall be installed when manhole depth exceeds 30". Steps shall be cast iron or extruded aluminum, 1000 lb. capacity, 12" wide with non-skid grooves and drop front on safety noses, in accordance with approved OSHA requirements.

STORM SEWER MANHOLE PRECAST RISER

CITY OF COLORADO SPRINGS
STORM SEWER-COVER & RISER
APPROVED BY Gary R. Phipps CITY ENGINEER

SCALE:	DATE:	DRAWN:	SHEET: D-20D
AS SHOWN	JAN. 89	P.L.B.	1 OF 4



Computer File Information		Sheet Revisions	
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CAD Ver.: MicroStation V8 Scale: Not to Scale Units: English			

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Project Development Branch JBK

CURB INLET TYPE R

STANDARD PLAN NO. M-604-12
Standard Sheet No. 1 of 2
Issued by the Project Development Branch: July 31, 2019
Project Sheet Number:

MARK	BAR # OR SIZE	O.C. SPACING	TYPE	ALL INLETS L = 5 FT. NO. REQ'D.	ALL INLETS L = 5 FT. LENGTH	INLETS: H ≤ 5 FT. L = 10 FT. NO. REQ'D.	INLETS: H ≤ 5 FT. L = 10 FT. LENGTH	INLETS: H ≤ 5 FT. L = 15 FT. NO. REQ'D.	INLETS: H ≤ 5 FT. L = 15 FT. LENGTH	INLETS: H > 5 FT. L = 10 FT. NO. REQ'D.	INLETS: H > 5 FT. L = 10 FT. LENGTH	INLETS: H > 5 FT. L = 15 FT. NO. REQ'D.	INLETS: H > 5 FT. L = 15 FT. LENGTH
401	4	11"	II	15	*	21	*	26	*	11	*	11	*
402	4	11"	II	7	*	13	*	18	*	7	*	7	*
403	4	9"	II	*	4'-0"	*	4'-0"	*	4'-0"	*	4'-0"	*	4'-0"
405	4	6"	VI	11	6'-10"	21	6'-10"	31	6'-10"	11	6'-10"	11	6'-10"
406	4	6"	VIII	7	8'-10"	7	13'-10"	7	18'-10"	7	8'-10"	7	8'-10"
407	5	9"	II	*	5'-10"	*	10'-10"	*	15'-10"	*	5'-10"	*	5'-10"
408	4	12"	II	3	5'-10"	3	11'-10"	3	16'-0"	3	11'-10"	3	16'-0"
409	4	8"	II	6	5'-10"	6	10'-10"	6	15'-10"	6	10'-10"	6	15'-10"
410	4	11"	VII							3	*	3	*
411	4	11"	II							3	5'-2"	3	10'-2"
412	4	11"	II							3	2'-8"	3	2'-8"
413	4	9"	II							7	10'-10"	7	15'-10"
501	5	5½"	IV	11	3'-4"	22	3'-4"	33	3'-4"	22	3'-4"	33	3'-4"
502	5	5½"	III							11	11'-5"	17	17'-5"
503	5	5½"	IX	5	3'-8"	16	3'-8"	27	3'-8"	6	3'-8"	6	3'-8"
504	5	5½"	IX									5	8'-4"
601	6	2½"	V	2	8'-10"	2	8'-10"	2	8'-10"	2	8'-10"	4	8'-10"
■#8 S				1 (1 BARS, 1 RIDS)	5'-10" ——	1 (1 BARS, 1 RIDS)	10'-10" ——	1 (1 BARS, 5 RIDS)	15'-10" ——	1 (1 BARS, 1 RIDS)	10'-10" ——	1 (1 BARS, 5 RIDS)	15'-10" ——
				REGULAR INLETS						DROP BOX INLETS			

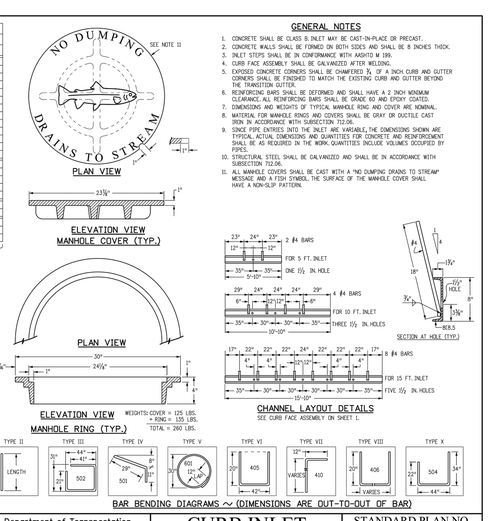
* VARIABLE REFER TO TABLE TWO.
■ INCLUDE #4s IN IN BARS (SEE CHANNEL LAYOUT).

TABLE ONE ~ BAR LIST FOR CURB INLETS, TYPE "R"

"H"	LENGTH 401	LENGTH 402	LENGTH 410	NO. REQ'D. REGULAR 403	NO. REQ'D. REGULAR 407	NO. REQ'D. DROP BOX 403	NO. REQ'D. DROP BOX 407	L = 5 FT. CONC. CU. YDS.	L = 5 FT. STEEL LBS.	L = 10 FT. CONC. CU. YDS.	L = 10 FT. STEEL LBS.	L = 15 FT. CONC. CU. YDS.	L = 15 FT. STEEL LBS.
3'-0"	2'-8"	1'-8"		10	7			3.2	285	5.3	497	7.4	706
3'-6"	3'-2"	2'-2"		10	7			3.4	305	5.7	528	7.9	747
4'-0"	3'-8"	2'-8"		12	9			3.7	326	6.0	559	8.4	786
4'-6"	4'-2"	3'-2"		12	9			3.9	334	6.4	571	8.8	803
5'-0"	4'-8"	3'-8"		14	11			4.1	354	6.7	602	9.3	844
5'-6"	5'-2"	4'-2"	3'-5"	16	13	15	6	4.4	375	6.9	607	7.4	850
6'-0"	5'-8"	4'-8"	3'-11"	16	13	16	6	4.6	382	6.2	616	7.6	860
6'-6"	6'-2"	5'-2"	4'-5"	18	15	18	8	4.8	402	6.4	637	7.8	880
7'-0"	6'-8"	5'-8"	4'-11"	20	17	19	10	5.0	423	6.6	654	8.0	897
7'-6"	7'-2"	6'-2"	5'-5"	20	17	20	10	5.3	430	6.9	664	8.3	907
8'-0"	7'-8"	6'-8"	5'-11"	22	19	22	12	5.5	451	7.1	684	8.5	927
8'-6"	8'-2"	7'-2"	6'-5"	24	21	23	14	5.7	471	7.3	702	8.7	944
9'-0"	8'-8"	7'-8"	6'-11"	24	21	24	14	6.0	479	7.6	711	9.0	954
9'-6"	9'-2"	8'-2"	7'-5"	26	23	26	16	6.2	499	7.8	732	9.2	974
10'-0"	9'-8"	8'-8"	7'-11"	28	25	27	18	6.4	520	8.0	749	9.4	992
10'-6"	10'-2"	9'-2"	8'-5"	28	25	28	18	6.7	527	8.3	759	9.7	1001
11'-0"	10'-8"	9'-8"	8'-11"	30	27	30	20	6.9	547	8.5	779	9.9	1022

NOTES: FOR L = 5 FT., L = 10 FT., AND L = 15 FT.
REGULAR INLETS: TOTAL QUANTITIES NEEDED ARE OUTSIDE THE HEAVY BLACK LINE.
DROP BOX INLETS: TOTAL QUANTITIES NEEDED ARE INSIDE THE HEAVY BLACK LINE.
STEEL WEIGHTS DO NOT INCLUDE STRUCTURAL STEEL CHANNEL.

TABLE TWO ~ BARS AND QUANTITIES VARIABLE WITH "H"



GENERAL NOTES

1. CONCRETE SHALL BE CLASS B. INLET MAY BE CAST-IN-PLACE OR PRECAST.
2. CONCRETE WALLS SHALL BE FORMED ON BOTH SIDES AND SHALL BE 8 INCHES THICK.
3. INLET STEPS SHALL BE IN CONFORMANCE WITH AASHTO M 199.
4. CURB FACE ASSEMBLY SHALL BE GALVANIZED AFTER WELDING.
5. EXPOSED CONCRETE CORNERS SHALL BE CHAMFERED ¾" OF A INCH CURB AND GUTTER CORNERS SHALL BE FINISHED TO MATCH THE EXISTING CURB AND GUTTER BEYOND THE TRANSITION GUTTER.
6. REINFORCING BARS SHALL BE DEFORMED AND SHALL HAVE A 2 INCH MINIMUM CLEARANCE. ALL REINFORCING BARS SHALL BE GRADE 60 AND EPOXY COATED.
7. DIMENSIONS AND WEIGHTS OF TYPICAL MANHOLE RING AND COVER ARE NOMINAL.
8. MATERIAL FOR MANHOLE RINGS AND COVERS SHALL BE GRAY OR DUCTILE CAST IRON IN ACCORDANCE WITH SUBSECTION 712.06.
9. SINCE PIPE ENTRIES INTO THE INLET ARE VARIABLE, THE DIMENSIONS SHOWN ARE TYPICAL; ACTUAL DIMENSIONS AND QUANTITIES FOR CONCRETE AND REINFORCEMENT BARS ARE AS REQUIRED IN THE WORK. QUANTITIES INCLUDE VOLUMES OCCUPIED BY PIPES.
10. STRUCTURAL STEEL SHALL BE GALVANIZED AND SHALL BE IN ACCORDANCE WITH SUBSECTION 712.06.
11. ALL MANHOLE COVERS SHALL BE CAST WITH A "NO DUMPING DRAINS TO STREAM" MESSAGE AND A FISH SYMBOL. THE SURFACE OF THE MANHOLE COVER SHALL HAVE A NON-SLIP PATTERN.

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Project Development Branch JBK

CURB INLET TYPE R

STANDARD PLAN NO. M-604-12
Standard Sheet No. 2 of 2
Issued by the Project Development Branch: July 31, 2019
Project Sheet Number:

DRAWN BY: NQJ	JOB DATE: 8/22/2022	BAR IS ONE INCH ON OFFICIAL DRAWINGS. 0 1" IF NOT ONE INCH, ADJUST SCALE ACCORDINGLY.	
APPROVED: KMH	JOB NUMBER: 200541		
CAD DATE: 8/22/2022			
CAD FILE: J:\2020\200541\CAD\Dwgs\C\CD\C.O.F\Details			

NO.	DATE	BY	REVISION DESCRIPTION

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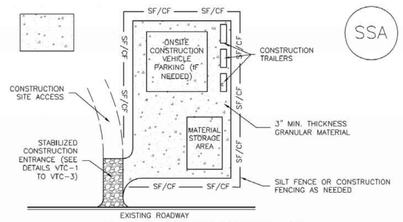
GOODWIN KNIGHT
FOUNTAIN, COLORADO

GOODWIN KNIGHT

CITY OF FOUNTAIN CONSTRUCTION DOCUMENTS
DETAILS

SHEET DT

Stabilized Staging Area (SSA) SM-6



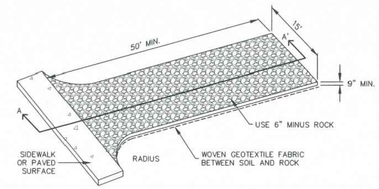
SSA-1. STABILIZED STAGING AREA

STABILIZED STAGING AREA INSTALLATION NOTES

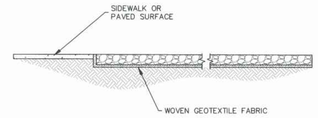
1. SEE PLAN VIEW FOR
   -LOCATION OF STAGING AREA(S).
   -CONTRACTOR MAY ADJUST LOCATION AND SIZE OF STAGING AREA WITH APPROVAL FROM THE LOCAL JURISDICTION.
2. STABILIZED STAGING AREA SHOULD BE APPROPRIATE FOR THE NEEDS OF THE SITE. OVERSIZING RESULTS IN A LARGER AREA TO STABILIZE FOLLOWING CONSTRUCTION.
3. STAGING AREA SHALL BE STABILIZED PRIOR TO OTHER OPERATIONS ON THE SITE.
4. THE STABILIZED STAGING AREA SHALL CONSIST OF A MINIMUM 3" THICK GRANULAR MATERIAL.
5. UNLESS OTHERWISE SPECIFIED BY LOCAL JURISDICTION, ROCK SHALL CONSIST OF DOT SECT. #703, AASHTO #3 COARSE AGGREGATE OR 6" (MINUS) ROCK.
6. ADDITIONAL PERIMETER BMPs MAY BE REQUIRED INCLUDING BUT NOT LIMITED TO SILT FENCE AND CONSTRUCTION FENCING.

STABILIZED STAGING AREA MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
4. ROCK SHALL BE REAPPLIED OR REGRADED AS NECESSARY IF RUTTING OCCURS OR UNDERLYING SUBGRADE BECOMES EXPOSED.



AGGREGATE VEHICLE TRACKING CONTROL



SECTION A-A'

INSTALLATION NOTES

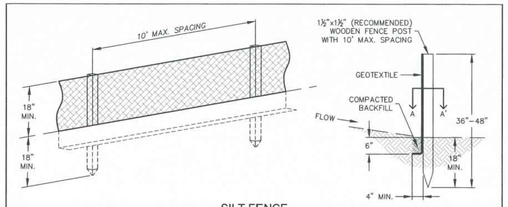
1. A STABILIZED CONSTRUCTION ENTRANCE/EXIT SHOULD BE LOCATED AT ALL POINTS WHERE VEHICLES EXIT THE CONSTRUCTION SITE TO ADJACENT ROADWAY.
2. STABILIZED CONSTRUCTION ENTRANCE/EXITS SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES.
3. RADIUS MUST BE ADEQUATE FOR INTENDED CONSTRUCTION VEHICLE TURNING.
4. ROCK SHOULD CONSIST OF 6" MINUS ROCK.
5. INSTALL CONSTRUCTION FENCE ON BOTH SIDES OF VEHICLE TRACKING CONTROL PAD WHEN NEEDED OR REQUIRED BY INSPECTOR.

MAINTENANCE NOTES

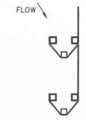
1. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN CONTROL MEASURES IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
2. SEDIMENT TRACKED ONTO THE ADJACENT ROAD SHALL BE REMOVED DAILY, BY SWEEPING OR SHOVELING, AND NEVER WASHED DOWN STORM DRAINS.
3. ROUGHEN, REPLACE AND/OR ADD ROCK AS NEEDED TO MAINTAIN CONSISTENT DEPTH AND TO PREVENT SEDIMENT TRACKING ONTO ADJACENT STREET.
4. PERMANENTLY STABILIZE AREA AFTER VEHICLE TRACKING CONTROL IS REMOVED.

VTC

STORMWATER ENTERPRISE — VEHICLE TRACKING CONTROL
APPROVED: SMENT MANAGER
ISSUED: 10/7/19 | REVISED: 8/19/2020 | DRAWING NO. 900-VTC



SILT FENCE



J-HOOK INSTALLATION

SECTION A-A'

INSTALLATION NOTES

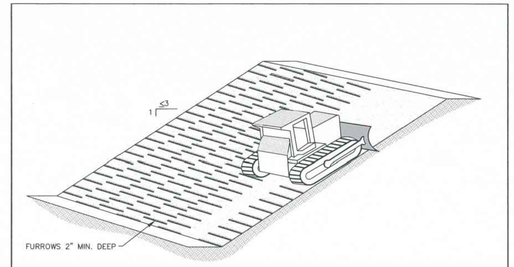
1. SILT FENCE MUST BE PLACED ON A FLAT SURFACE 2'-5' AWAY FROM TOE OF THE SLOPE TO ALLOW FOR PONDING AND DEPOSITION.
2. COMPACT THE TRENCH USING A JUMPING JACK OR WHEEL ROLLING TO THE POINT THAT THE FENCE RESISTS BEING PULLED OUT OF THE GROUND BY HAND.
3. SILT FENCE SHALL BE TAUT WITH NO SAGS AFTER IT HAS BEEN ANCHORED.
4. FABRIC SHALL BE ATTACHED TO POSTS WITH 1" HEAVY DUTY STAPLES OR 1" NAILS. THESE SHOULD BE PLACED VERTICALLY DOWN THE POST, 3" APART.
5. THE PREFERRED INSTALLATION METHOD USES A TRENCHER OR SILT FENCE INSTALLATION DEVICE.
6. INSTALL SILT FENCE ALONG THE CONTOUR OF THE SLOPES OR IN A MANNER TO AVOID CREATING CONCENTRATED FLOW (SUCH AS A "J-HOOK" INSTALLATION).

MAINTENANCE NOTES

1. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN CONTROL MEASURES IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
2. ACCUMULATED SEDIMENT MUST BE REMOVED WHEN THE HEIGHT REACHES ½ OF THE DESIGN HEIGHT OF THE SILT FENCE.
3. SILT FENCE MUST REMAIN UNTIL THE UPSTREAM DISTURBANCE AREA IS STABILIZED.
4. PERMANENTLY STABILIZE AREA AFTER SILT FENCE IS REMOVED.

SF

STORMWATER ENTERPRISE — SILT FENCE
APPROVED: SMENT MANAGER
ISSUED: 10/7/19 | REVISED: 8/19/2020 | DRAWING NO. 900-SF



SLOPE TRACKING

INSTALLATION NOTES

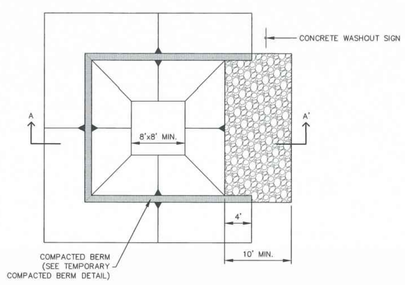
1. SLOPE TRACKING MAY BE USED ON SLOPES 3:1 OR STEEPER.
2. TRACKING GROOVES SHALL BE PERPENDICULAR TO THE SLOPE.
3. SLOPE TRACKING SHALL NOT BE USED ON EXTREMELY SANDY OR ROCKY SOILS.

MAINTENANCE NOTES

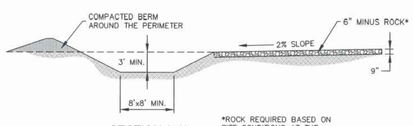
1. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN CONTROL MEASURES IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
2. VEHICLES AND EQUIPMENT SHALL NOT BE DRIVEN OVER AREAS THAT HAVE BEEN SLOPE TRACKED.

ST

STORMWATER ENTERPRISE — SLOPE TRACKING
APPROVED: SMENT MANAGER
ISSUED: 10/7/19 | REVISED: 8/19/2020 | DRAWING NO. 900-ST



CONCRETE WASHOUT AREA PLAN



SECTION A-A'

*ROCK REQUIRED BASED ON SITE CONDITIONS AT THE DISCRETION OF THE QEC INSPECTOR

CWA

STORMWATER ENTERPRISE — CONCRETE WASHOUT AREA
APPROVED: SMENT MANAGER
ISSUED: 10/7/19 | REVISED: 8/19/2020 | DRAWING NO. 900-CWA-1

INSTALLATION NOTES

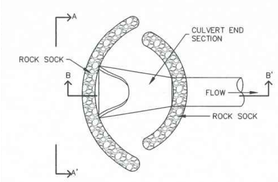
1. SEE PLAN VIEW FOR:
   -LOCATION OF CONCRETE WASHOUT AREA
2. LOCATE AT LEAST 50' AWAY FROM STATE WATERS MEASURED HORIZONTALLY.
3. AN IMPERMEABLE LINER (16 MIL. MINIMUM THICKNESS) IS REQUIRED IF CONCRETE WASH AREA IS LOCATED WITHIN 400' OF STATE WATERS OR 1000' OF WELLS OR DRINKING WATER SOURCES.
4. DO NOT LOCATE IN AREAS WHERE SHALLOW GROUNDWATER MAY BE PRESENT.
5. THE CONCRETE WASH AREA SHALL BE INSTALLED PRIOR TO CONCRETE PLACEMENT ON SITE.
6. CONCRETE WASH AREA SHALL INCLUDE A FLAT SUBSURFACE PIT THAT IS AT LEAST 8' BY 8'.
7. BERM SURROUNDING SIDES AND BACK OF CONCRETE WASH AREA SHALL HAVE A MINIMUM HEIGHT OF 2 FEET.
8. CONCRETE WASH AREA ENTRANCE SHALL BE SLOPED 2% TOWARDS THE CONCRETE WASH AREA.
9. SIGNS SHALL BE PLACED AT THE CONCRETE WASH AREA.
10. USE EXCAVATED MATERIAL FOR PERIMETER BERM CONSTRUCTION.

MAINTENANCE NOTES

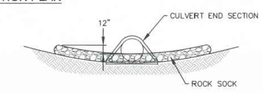
1. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN CONTROL MEASURES IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
2. THE CONCRETE WASH AREA SHALL BE REPAIRED, CLEANED, OR ENLARGED AS NECESSARY TO MAINTAIN CAPACITY FOR CONCRETE WASTE. CONCRETE MATERIALS ACCUMULATED IN THE PIT SHALL BE REMOVED ONCE THE MATERIALS HAVE REACHED A DEPTH OF ⅔ THE HEIGHT OF THE CONCRETE WASH AREA.
3. CONCRETE WASHOUT WATER, WASTED PIECES OF CONCRETE, AND ALL OTHER DEBRIS IN THE SUBSURFACE PIT SHALL BE TRANSPORTED FROM THE JOB SITE IN A WATER-TIGHT CONTAINER AND DISPOSED OF PROPERLY.
4. THE CONCRETE WASH AREA SHALL REMAIN IN PLACE UNTIL ALL CONCRETE FOR THE PROJECT IS PLACED.
5. PERMANENTLY STABILIZE AREA AFTER CONCRETE WASH AREA IS REMOVED.

CWA

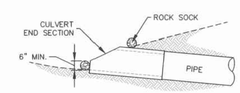
STORMWATER ENTERPRISE — CONCRETE WASHOUT AREA
APPROVED: SMENT MANAGER
ISSUED: 10/7/19 | REVISED: 8/19/2020 | DRAWING NO. 900-CWA-2



CULVERT INLET PROTECTION PLAN



SECTION A-A'



SECTION B-B'

INSTALLATION NOTES

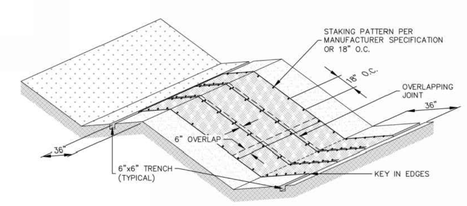
1. SEE ROCK SOCK DETAIL.

MAINTENANCE NOTES

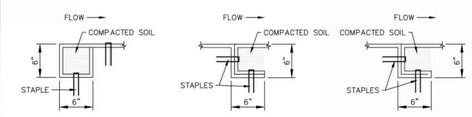
1. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN CONTROL MEASURES IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
2. ACCUMULATED SEDIMENT UPSTREAM OF THE CULVERT SHALL BE REMOVED WHEN THE SEDIMENT DEPTH IS ½ HEIGHT OF THE ROCK SOCK.
3. CULVERT INLET PROTECTION SHALL REMAIN UNTIL THE UPSTREAM AREA IS PERMANENTLY STABILIZED.

CIP

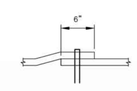
STORMWATER ENTERPRISE — CULVERT INLET PROTECTION
APPROVED: SMENT MANAGER
ISSUED: 10/7/19 | REVISED: 8/19/2020 | DRAWING NO. 900-CIP



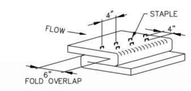
EROSION CONTROL BLANKET



PERIMETER ANCHOR TRENCH | JOINT ANCHOR TRENCH | INTERMEDIATE CHECK SLOT



OVERLAPPING JOINT



STAPLE CHECK
TO BE USED ON SLOPE EVERY 15 FEET

ECB

STORMWATER ENTERPRISE — EROSION CONTROL BLANKET
APPROVED: SMENT MANAGER
ISSUED: 10/7/19 | REVISED: 8/19/2020 | DRAWING NO. 900-ECB-1

DRAWN BY: NQJ	JOB DATE: 8/22/2022	BAR IS ONE INCH ON OFFICIAL DRAWINGS. 0 1"	
APPROVED: KMH	JOB NUMBER: 200541	IF NOT ONE INCH, ADJUST SCALE ACCORDINGLY.	
CAD DATE: 8/22/2022			
CAD FILE: J:\2020\200541\CAD\Dwgs\C\CD\C.O.F\Details			

NO.	DATE	BY	REVISION DESCRIPTION

HRGreen
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COLORADO SPRINGS CO 80919
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THE COTTAGES AT MESA RIDGE
GOODWIN KNIGHT
FOUNTAIN, COLORADO

GOODWIN KNIGHT

CITY OF FOUNTAIN CONSTRUCTION DOCUMENTS
DETAILS

SHEET DT

INSTALLATION NOTES

1. 100% NATURAL AND BIODEGRADABLE MATERIALS ARE REQUIRED FOR EROSION CONTROL BLANKETS. TRM PRODUCTS MAY ME USED WHERE APPROPRIATE AS DESIGNATED BY THE ENGINEER.
2. IN AREAS WHERE EROSION CONTROL BLANKETS ARE SHOWN ON THE PLANS, THE PERMITTEE SHALL PLACE TOPSOIL AND PERFORM FINAL GRADING, SURFACE PREPARATION, AND SEEDING AND MULCHING. SUBGRADE SHALL BE SMOOTH AND MOIST PRIOR TO EROSION CONTROL BLANKET INSTALLATION, AND THE EROSION CONTROL BLANKET SHALL BE IN FULL CONTACT WITH THE SUBGRADE. NO GAPS OR VOIDS SHALL EXIST UNDER THE BLANKET.
3. PERIMETER ANCHOR TRENCH SHALL BE USED ALONG THE OUTSIDE PERIMETER OF ALL BLANKET AREAS.
4. JOINT ANCHOR TRENCH SHALL BE USED TO JOIN ROLLS OF EROSION CONTROL BLANKETS TOGETHER (LONGITUDINALLY AND TRANSVERSELY) FOR ALL EROSION CONTROL BLANKETS.
5. INTERMEDIATE CHECK SLOT OR STAPLE CHECK SHALL BE INSTALLED EVERY 15' DOWN SLOPES. IN DRAINAGEWAYS, INSTALL CHECK SLOTS EVERY 25' PERPENDICULAR TO FLOW DIRECTION.
6. OVERLAPPING JOINT DETAIL SHALL BE USED TO JOIN ROLLS OF EROSION CONTROL BLANKETS TOGETHER FOR EROSION CONTROL BLANKETS ON SLOPES.
7. MATERIAL SPECIFICATIONS OF EROSION CONTROL BLANKETS SHALL CONFORM TO TABLE ECB-1.
8. ANY AREAS OF SEEDING AND MULCHING DISTURBED IN THE PROCESS OF INSTALLING EROSION CONTROL BLANKETS SHALL BE RESEEDED AND MULCHED.
9. STRAW EROSION CONTROL BLANKETS SHALL NOT BE USED WITHIN STREAMS AND DRAINAGE CHANNELS.
10. COMPACT ALL TRENCHES.

MAINTENANCE NOTES

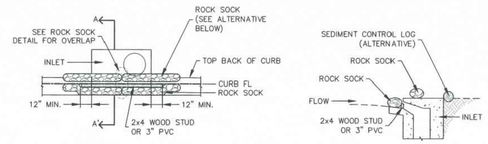
1. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN CONTROL MEASURES IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
2. EROSION CONTROL BLANKETS SHALL BE LEFT IN PLACE TO EVENTUALLY BIODEGRADE. TRM MUST BE REMOVED AT THE DISCRETION OF THE GEC INSPECTOR.
3. ANY EROSION CONTROL BLANKET PULLED OUT, TORN, OR OTHERWISE DAMAGED SHALL BE REPAIRED OR REINSTALLED. ANY SUBGRADE AREAS BELOW GEOTEXTILE THAT HAVE ERODED TO CREATE A VOID UNDER THE BLANKET, OR THAT REMAIN DEVOID OF GRASS SHALL BE REPAIRED, RESEEDED AND MULCHED AND THE EROSION CONTROL BLANKET REINSTALLED.

TABLE ECB-1, EROSION CONTROL BLANKET MATERIAL SPECIFICATIONS

TYPE	COCONUT CONTENT	STRAW CONTENT	EXCELSIOR CONTENT	RECOMMENDED NETTING
STRAW	–	100%	–	DOUBLE/ NATURAL
STRAW-COCONUT	30% MIN.	70% MAX.	–	DOUBLE/ NATURAL
COCONUT	100%	–	–	DOUBLE/ NATURAL
EXCELSIOR	–	–	100%	DOUBLE/ NATURAL

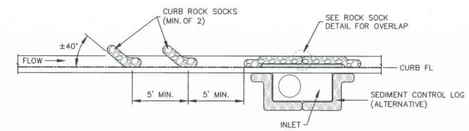
ECB

STORMWATER ENTERPRISE — EROSION CONTROL BLANKET
APPROVED: CMENT MANAGER
ISSUED: 10/7/19 | REVISED: 8/19/2020 | DRAWING NO. 900-ECB-2



CURB INLET PROTECTION PLAN

SECTION A-A'



CURB ROCK SOCKS UPSTREAM OF INLET PROTECTION

INSTALLATION NOTES

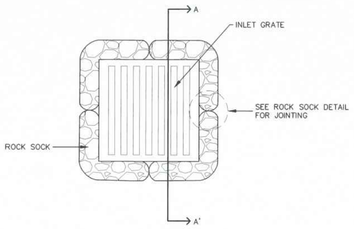
1. SEE ROCK SOCK DETAIL FOR INSTALLATION REQUIREMENTS.
2. PLACEMENT OF THE ROCK SOCK SHALL BE APPROXIMATELY 40 DEGREES FROM THE CURB.
3. ROCK SOCKS ARE TO BE FLUSH WITH THE CURB AND SPACED A MINIMUM OF 5' APART.
4. AT LEAST TWO CURB ROCK SOCKS IN SERIES ARE REQUIRED UPSTREAM OF ON-GRADIENT INLETS.
5. ADDITIONAL ROCK SOCKS MAY BE REQUIRED AT GEC INSPECTOR'S DISCRETION.

MAINTENANCE NOTES

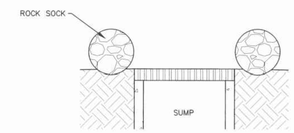
1. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN CONTROL MEASURES IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
2. ACCUMULATED SEDIMENT MUST BE REMOVED WHEN THE HEIGHT REACHES ½ OF THE DESIGN DEPTH OF THE INLET BARRIER.
3. ROCK SOCKS MUST REMAIN UNTIL THE UPSTREAM DISTURBANCE AREA IS STABILIZED.
4. PERMANENTLY STABILIZE AREA BEHIND INLET AFTER ROCK SOCKS ARE REMOVED WHEN REMOVAL IS APPROPRIATE.

IP-1

STORMWATER ENTERPRISE — ON-GRADE INLET PROTECTION
APPROVED: CMENT MANAGER
ISSUED: 10/7/19 | REVISED: 8/19/2020 | DRAWING NO. 900-IP-1



ROCK SOCK SUMP INLET PROTECTION PLAN



SECTION A-A'

INSTALLATION NOTES

1. SEE ROCK SOCK DETAIL FOR INSTALLATION REQUIREMENTS.
2. SEDIMENT CONTROL LOGS MAY BE USED IN PLACE OF ROCK SOCKS IN PERVIOUS AREAS. INSTALL PER SEDIMENT CONTROL LOG DETAIL
3. CONTROL MEASURES MUST BE WRAPPED AROUND INLET AS TIGHTLY AS POSSIBLE.

MAINTENANCE NOTES

1. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN CONTROL MEASURES IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
2. ACCUMULATED SEDIMENT MUST BE REMOVED WHEN THE HEIGHT REACHES ½ OF THE DESIGN DEPTH OF THE INLET BARRIER.
3. ROCK SOCKS MUST REMAIN UNTIL THE UPSTREAM DISTURBANCE AREA IS STABILIZED.
4. PERMANENTLY STABILIZE AREA AROUND INLET AFTER ROCK SOCKS ARE REMOVED WHEN REMOVAL IS APPROPRIATE.

IP-2

STORMWATER ENTERPRISE — SUMP INLET PROTECTION
APPROVED: CMENT MANAGER
ISSUED: 10/7/19 | REVISED: 8/19/2020 | DRAWING NO. 900-IP-2

SEEDING & MULCHING

ALL SOIL TESTING, SOILS AMENDMENT AND FERTILIZER DOCUMENTATION, AND SEED LOAD AND BAG TICKETS MUST BE ADDED TO THE CSWMP.

SOIL PREPARATION

1. IN AREAS TO BE SEEDED, THE UPPER 6 INCHES OF THE SOIL MUST NOT BE HEAVILY COMPACTED, AND SHOULD BE IN FRIABLE CONDITION. LESS THAN 85% STANDARD PROCTOR DENSITY IS ACCEPTABLE. AREAS OF COMPACTION OR GENERAL CONSTRUCTION ACTIVITY MUST BE SCARIFIED TO A DEPTH OF 6 TO 12 INCHES PRIOR TO SPREADING TOPSOIL TO BREAK UP COMPACTED LAYERS AND PROVIDE A BLENDING ZONE BETWEEN DIFFERENT SOIL LAYERS.
2. AREAS TO BE PLANTED SHALL HAVE AT LEAST 4 INCHES OF TOPSOIL SUITABLE TO SUPPORT PLANT GROWTH.
3. THE CITY RECOMMENDS THAT EXISTING AND/OR IMPORTED TOPSOIL BE TESTED TO IDENTIFY SOIL DEFICIENCIES AND ANY SOIL AMENDMENTS NECESSARY TO ADDRESS THESE DEFICIENCIES. SOIL AMENDMENTS AND/OR FERTILIZERS SHOULD BE ADDED TO CORRECT TOPSOIL DEFICIENCIES BASED ON SOIL TESTING RESULTS.
4. TOPSOIL SHALL BE PROTECTED DURING THE CONSTRUCTION PERIOD TO RETAIN ITS STRUCTURE AVOID COMPACTION, AND TO PREVENT EROSION AND CONTAMINATION. STRIPPED TOPSOIL MUST BE STORED IN AN AREA AWAY FROM MACHINERY AND CONSTRUCTION OPERATIONS, AND CARE MUST BE TAKEN TO PROTECT THE TOPSOIL AS A VALUABLE COMMODITY. TOPSOIL MUST NOT BE STRIPPED DURING UNDESIRABLE WORKING CONDITIONS (E.G. DURING WET WEATHER OR WHEN SOILS ARE SATURATED). TOPSOIL SHALL NOT BE STORED IN SWALES OR IN AREAS WITH POOR DRAINAGE.

SEEDING

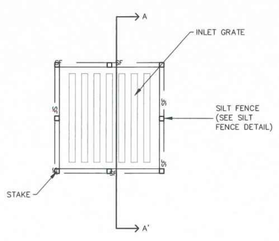
1. ALLOWABLE SEED MIXES ARE INCLUDED IN THE CITY OF COLORADO SPRINGS STORMWATER CONSTRUCTION MANUAL. ALTERNATIVE SEED MIXES ARE ACCEPTABLE IF INCLUDED IN AN APPROVED LANDSCAPING PLAN.
2. SEED SHOULD BE DRILL-SEEDED WHENEVER POSSIBLE
   - SEED DEPTH MUST BE ¼ TO ½ INCHES WHEN DRILL-SEEDING IS USED
3. BROADCAST SEEDING OR HYDRO-SEEDING WITH TACKIFIER MAY BE SUBSTITUTED ON SLOPES STEEPER THAN 3:1 OR ON OTHER AREAS NOT PRACTICAL TO DRILL SEED.
   - SEEDING RATES MUST BE DOUBLED FOR BROADCAST SEEDING OR INCREASED BY 50% IF USING A BRILLION DRILL OR HYDRO-SEEDING
   - BROADCAST SEEDING MUST BE LIGHTLY HAND-RAKED INTO THE SOIL

MULCHING

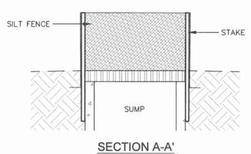
1. MULCHING SHOULD BE COMPLETED AS SOON AS PRACTICABLE AFTER SEEDING, HOWEVER PLANTED AREAS MUST BE MULCHED NO LATER THAN 14 DAYS AFTER PLANTING.
2. MULCHING REQUIREMENTS INCLUDE:
   - HAY OR STRAW MULCH
     - ONLY CERTIFIED WEED-FREE AND CERTIFIED SEED-FREE MULCH MAY BE USED. MULCH MUST BE APPLIED AT 2 TONS/ACRE AND ADEQUATELY SECURED BY CRIMPING AND/OR TACKIFIER.
     - CRIMPING MUST NOT BE USED ON SLOPES GREATER THAN 3:1 AND MULCH FIBERS MUST BE TUCKED INTO THE SOIL TO A DEPTH OF 3 TO 4 INCHES.
     - TACKIFIER MUST BE USED IN PLACE OF CRIMPING ON SLOPES STEEPER THAN 3:1.
   - HYDRAULIC MULCHING
     - HYDRAULIC MULCHING IS AN OPTION ON STEEP SLOPES OR WHERE ACCESS IS LIMITED.
     - IF HYDRO-SEEDING IS USED, MULCHING MUST BE APPLIED AS A SEPARATE, SECOND OPERATION.
     - WOOD CELLULOSE FIBERS MIXED WITH WATER MUST BE APPLIED AT A RATE OF 2,000 TO 2,500 POUNDS/ACRE, AND TACKIFIER MUST BE APPLIED AT A RATE OF 100 POUNDS/ACRE.
   - EROSION CONTROL BLANKET
     - EROSION CONTROL BLANKET MAY BE USED IN PLACE OF TRADITIONAL MULCHING METHODS.

SM

STORMWATER ENTERPRISE — SEEDING & MULCHING
APPROVED: CMENT MANAGER
ISSUED: 10/7/19 | REVISED: 8/19/2020 | DRAWING NO. 900-SM



SILT FENCE SUMP INLET PROTECTION PLAN



SECTION A-A'

INSTALLATION NOTES

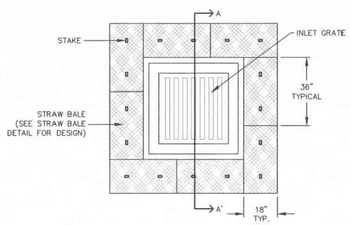
1. SEE SILT FENCE DETAIL FOR INSTALLATION REQUIREMENTS.
2. POSTS SHALL BE PLACED AT EACH CORNER OF THE INLET AND AROUND THE EDGES AT A MAXIMUM SPACING OF THREE FEET.
3. SILT FENCE FABRIC SHOULD HAVE A FLOW RATE IN EXCESS OF 30 GALLONS PER MINUTE PER SQUARE YARD SO AS TO ALLOW SOME WATER FLOW AND NOT DAM THE WATER. STANDARD, LOW-FLOW SILT FENCE FABRIC WILL NOT BE ALLOWED.

MAINTENANCE NOTES

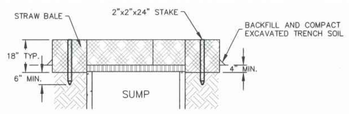
1. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN CONTROL MEASURES IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
2. ACCUMULATED SEDIMENT MUST BE REMOVED WHEN THE HEIGHT REACHES ½ OF THE DESIGN DEPTH OF THE INLET BARRIER.
3. SILT FENCE MUST REMAIN UNTIL THE UPSTREAM DISTURBANCE AREA IS STABILIZED.
4. PERMANENTLY STABILIZE AREA AROUND INLET AFTER SILT FENCE IS REMOVED WHEN REMOVAL IS APPROPRIATE.

IP-3

STORMWATER ENTERPRISE — SUMP INLET PROTECTION
APPROVED: CMENT MANAGER
ISSUED: 10/7/19 | REVISED: 8/19/2020 | DRAWING NO. 900-IP-3



STRAW BALE SUMP INLET PROTECTION PLAN



SECTION A-A'

INSTALLATION NOTES

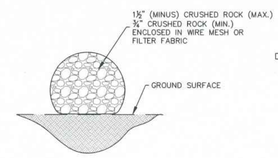
1. BALES SHALL BE PLACED IN A SINGLE ROW AROUND THE INLET WITH THE ENDS OF THE BALES TIGHTLY ABUTTING ONE ANOTHER.
2. STRAW BALES SHALL CONSIST OF CERTIFIED WEED FREE STRAW OR HAY. LOCAL JURISDICTIONS MAY REQUIRE PROOF THAT BALES ARE WEED FREE.
3. STRAW BALES SHALL CONSIST OF APPROXIMATELY 5 CUBIC FEET OF STRAW OR HAY AND WEIGH NOT LESS THAN 35 POUNDS.
4. STRAW BALE DIMENSIONS SHALL BE APPROXIMATELY 36"x18"x18".
5. A UNIFORM ANCHOR TRENCH SHALL BE EXCAVATED TO A DEPTH OF 4". STRAW BALES SHALL BE PACED SO THAT THE BINDING TWINE IS ENCOMPASSING THE VERTICAL SIDES OF THE BALE(S).
6. TWO (2) WOODEN STAKES SHALL BE USED TO HOLD EACH BALE IN PLACE. WOODEN STAKED SHALL BE 2"x2"x24 (MIN.)". WOODEN STAKES SHALL BE DRIVEN A MINIMUM OF 6" INTO THE GROUND.

MAINTENANCE NOTES

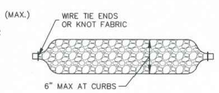
1. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN CONTROL MEASURES IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
2. ACCUMULATED SEDIMENT MUST BE REMOVED WHEN THE HEIGHT REACHES ½ OF THE DESIGN DEPTH OF THE INLET BARRIER.
3. STRAW BALES MUST REMAIN UNTIL THE UPSTREAM DISTURBANCE AREA IS STABILIZED.
4. PERMANENTLY STABILIZE AREA AROUND INLET AFTER STRAW BALES ARE REMOVED WHEN REMOVAL IS APPROPRIATE.
5. STRAW BALES SHALL BE REPLACED IF THEY BECOME HEAVILY SOILED, ROTTEN OR DAMAGED BEYOND REPAIR.

IP-4

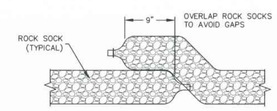
STORMWATER ENTERPRISE — SUMP INLET PROTECTION
APPROVED: CMENT MANAGER
ISSUED: 10/7/19 | REVISED: 8/19/2020 | DRAWING NO. 900-IP-4



ROCK SOCK SECTION



ROCK SOCK PLAN



ROCK SOCK OVERLAP

GRADATION TABLE

	MASS PERCENT PASSING SQUARE MESH SIEVES
	No. 4
2"	100
1½"	90-100
1"	20-55
¾"	0-15
⅜"	0-5

MATCHES SPECIFICATIONS FOR No. 4 COARSE AGGREGATE FOR CONCRETE PER AASHTO M-43. ALL ROCK SHALL BE FRACTURED FACE, ALL SIDES

INSTALLATION NOTES

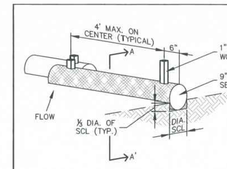
1. CRUSHED ROCK SHALL BE BETWEEN MAX. 1½" (MINUS) IN SIZE WITH A FRACTURED FACE (ALL SIDES) AND SHALL COMPLY WITH GRADATION SHOWN ON THIS SHEET AND MIN. ¾" CRUSHED ROCK.
2. WIRE MESH SHALL HAVE OPENINGS SMALLER THAN THE SMALLEST SIZE ROCK.
3. WIRE MESH SHALL BE SECURED USING 'HOG RINGS' OR WIRE TIES AT 6" CENTERS ALONG ALL JOINTS AND AT 2" CENTERS ON ENDS OF SOCKS.

MAINTENANCE NOTES

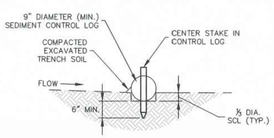
1. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN CONTROL MEASURES IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
2. ROCK SOCKS SHALL BE REPLACED IF THEY BECOME HEAVILY SOILED OR DAMAGED BEYOND REPAIR.
3. ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN THE DEPTH REACHES ½ OF THE HEIGHT OF THE ROCK SOCK.
4. ROCK SOCKS ARE TO REMAIN IN PLACE UNTIL DISTURBED AREA IS STABILIZED.
5. PERMANENTLY STABILIZE AREA AFTER ROCK SOCKS HAVE BEEN REMOVED.

RS

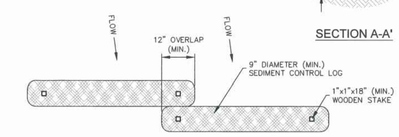
STORMWATER ENTERPRISE — ROCK SOCK
APPROVED: CMENT MANAGER
ISSUED: 10/7/19 | REVISED: 8/19/2020 | DRAWING NO. 900-RS



SEDIMENT CONTROL LOG



SECTION A-A'



SEDIMENT CONTROL LOG JOINTS

INSTALLATION NOTES

1. ALL SEDIMENT CONTROL LOGS MUST BE EMBEDDED TO ⅓ OF THE HEIGHT OF THE LOG.
2. LARGER DIAMETER SEDIMENT CONTROL LOGS NEED TO BE EMBEDDED DEEPER.
3. PLACE SEDIMENT CONTROL LOG AGAINST SIDEWALK OR BACK OF CURB WHEN ADJACENT TO THESE FEATURES.
4. SEDIMENT CONTROL LOGS SHALL CONSIST OF STRAW, COMPOST, EXCELSIOR OR COCONUT FIBER, AND SHALL BR FREE FROM ANY NOXIOUS WEED SEEDS OF DEFECTS INCLUDING RIPS, HOLES AND OBVIOUS WEAR.
5. IF USING AS SLOPE PROTECTION, INSTALL SEDIMENT CONTROL LOGS ALONG THE CONTOUR.

MAINTENANCE NOTES

1. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN CONTROL MEASURES IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
2. ACCUMULATED SEDIMENT MUST BE REMOVED WHEN THE HEIGHT REACHES ½ OF THE HEIGHT OF THE SEDIMENT CONTROL LOG.
3. PERMANENTLY STABILIZE AREA AFTER SEDIMENT CONTROL LOGS HAVE BEEN REMOVED.

SCL

STORMWATER ENTERPRISE — SEDIMENT CONTROL LOGS
APPROVED: CMENT MANAGER
ISSUED: 10/7/19 | REVISED: 8/19/2020 | DRAWING NO. 900-SCL

DRAWN BY: YOU | JOB DATE: 8/22/2022
APPROVED: KEN | JOB NUMBER: 200541
CAD DATE: 8/22/2022
CAD FILE: J:\2020\200541\CAD\Dwgs\C\CD\C.O.F\Details

BAR IS ONE INCH ON OFFICIAL DRAWINGS. 0 — 1" IF NOT ONE INCH, ADJUST SCALE ACCORDINGLY.

NO.	DATE	BY	REVISION DESCRIPTION

HRGreen
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7222 COMMERCE CENTER DR SUITE 220
COLORADO SPRINGS CO 80919
PHONE: 719.300.4140 TOLL FREE: 800.728.7805
FAX: 844.273.1057 | HRGreen.com

THE COTTAGES AT MESA RIDGE
GOODWIN KNIGHT
FOUNTAIN, COLORADO

GOODWIN KNIGHT

CITY OF FOUNTAIN CONSTRUCTION DOCUMENTS
DETAILS

SHEET DT

THE COTTAGES AT MESA RIDGE
FOUNTAIN MUTUAL IRRIGATION COMPANY
IRRIGATION PIPE CONSTRUCTION DRAWINGS

A PORTION OF THE NORTHEAST QUARTER OF SECTION 29, THE SOUTHEAST QUARTER OF SECTION 20, THE SOUTHWEST QUARTER OF SECTION 21, & THE NORTHWEST QUARTER OF SECTION 28 TOWNSHIP 15 SOUTH, RANGE 65 WEST OF THE 6TH P.M. COUNTY OF EL PASO, STATE OF COLORADO

BASIS OF BEARINGS:

BEARINGS ARE BASED UPON THE NORTH LINE OF THE NORTHEAST QUARTER OF SAID SECTION 29, MONUMENTED AT THE WEST END WITH A 3.25" ALUMINUM CAP IN CONCRETE STAMPED "PLS 4842" AND MONUMENTED AT THE EAST END WITH A #6 REBAR AND 3.25" ALUMINUM CAP STAMPED "PLS 38141" AND ASSUMED TO BEAR S 89°57'13" E A FIELD MEASURED DISTANCE OF 2,652.37 FEET.

BENCHMARK:

ELEVATIONS ARE BASED UPON THE FOUNTAIN SANITATION DISTRICT POINT N-1, BEING A 2" BRASS CAP IN CONCRETE AT THE NORTHEAST CORNER OF MESA RIDGE PARKWAY AND FOUNTAIN MESA ROAD. (ELEVATION=5750.57 NGVD 29).

LEGAL DESCRIPTION:

THAT PORTION OF THE NORTHWEST QUARTER OF SECTION 28 AND THE NORTHEAST QUARTER OF SECTION 29, TOWNSHIP 15 SOUTH, RANGE 65 WEST OF THE 6TH P.M., COUNTY OF EL PASO, STATE OF COLORADO, DESCRIBED AS FOLLOWS:

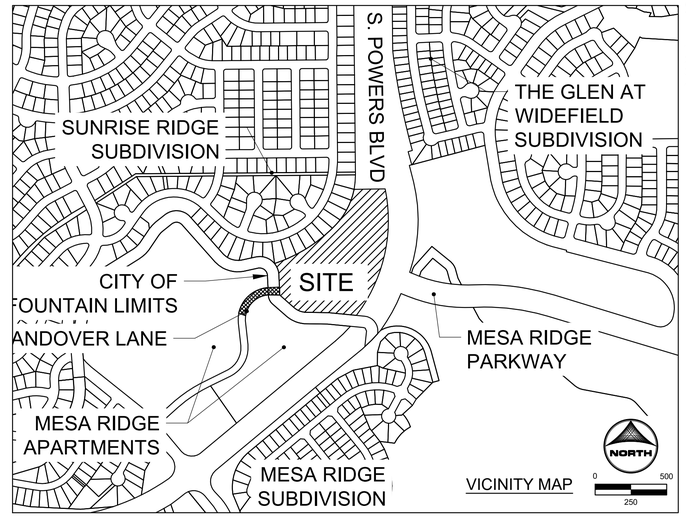
BASIS OF BEARINGS: BEARINGS ARE BASED UPON THE NORTH LINE OF THE NORTHEAST QUARTER OF SAID SECTION 29, MONUMENTED AT THE WEST END WITH A 3.25" ALUMINUM CAP IN CONCRETE STAMPED "PLS 4842" AND MONUMENTED AT THE EAST END WITH A #6 REBAR AND 3.25" ALUMINUM CAP STAMPED "PLS 38141" AND ASSUMED TO BEAR S 89°57'13" E A FIELD MEASURED DISTANCE OF 2,652.37 FEET.

BENCHMARK: ELEVATIONS ARE BASED UPON THE FOUNTAIN SANITATION DISTRICT POINT N-1, BEING A 2" BRASS CAP IN CONCRETE AT THE NORTHEAST CORNER OF MESA RIDGE PARKWAY AND FOUNTAIN MESA ROAD. (ELEVATION=5750.57 NGVD 29).

BEGINNING AT THE NORTHWEST CORNER OF THE NORTHWEST QUARTER OF SAID SECTION 28;
THENCE N 89°41'59" E ALONG THE NORTH LINE OF SAID NORTHWEST QUARTER, A DISTANCE OF 117.30 FEET TO A POINT ON THE WEST LINE OF POWERS BOULEVARD AS RECORDED UNDER BOOK 6788 AT PAGE 531 OF THE RECORDS OF THE EL PASO COUNTY CLERK AND RECORDERS OFFICE;
THENCE ALONG THE WEST LINE OF SAID POWERS BOULEVARD, 933.14 FEET ALONG THE ARC OF A 1,096.98 FOOT RADIUS CURVE TO THE RIGHT, HAVING A CENTRAL ANGLE OF 48°44'17" AND A CHORD THAT BEARS S 12°56'23" W, 905.26 FEET TO A POINT ON THE NORTHERLY LINE OF THAT PARCEL OF LAND DESCRIBED UNDER BOOK 5506 AT PAGE 1290 OF SAID RECORDS;
THENCE OF THE FOLLOWING EIGHT (8) COURSES ALONG SAID NORTHERLY LINES AND EASTERLY LINES OF SAID PARCEL OF LAND DESCRIBED UNDER BOOK 5506 AT PAGE 1290:
1) N 84°16'00" W, A DISTANCE OF 198.99 FEET;
2) 46.11 FEET ALONG THE ARC OF A 540.00 FOOT RADIUS TANGENT CURVE TO THE LEFT, HAVING A CENTRAL ANGLE OF 04°53'33" AND A CHORD THAT BEARS N 86°42'46" W, 46.10 FEET;
3) N 89°09'33" W, A DISTANCE OF 124.09 FEET;
4) 100.02 FEET ALONG THE ARC OF A 140.00 FOOT RADIUS TANGENT CURVE TO THE RIGHT, HAVING A CENTRAL ANGLE OF 40°56'07" AND A CHORD THAT BEARS N 68°41'30" W, 97.91 FEET;
5) N 48°13'27" W, A DISTANCE OF 126.77 FEET;
6) 6.49 FEET ALONG THE ARC OF AN 8.00 FOOT RADIUS TANGENT CURVE TO THE RIGHT, HAVING A CENTRAL ANGLE OF 46°29'23" AND A CHORD THAT BEARS N 24°58'45" W, 6.31 FEET;
7) N 01°44'04" W, A DISTANCE OF 137.18 FEET;
8) 87.71 FEET ALONG THE ARC OF A 135.00 FOOT RADIUS TANGENT CURVE TO THE LEFT, HAVING A CENTRAL ANGLE OF 37°13'35" AND A CHORD THAT BEARS N 20°21'02" W, 86.18 FEET TO THE SOUTHWEST CORNER OF LOT 15, BLOCK 3, SUNRISE RIDGE SUBDIVISION FILING NO. 8 AS RECORDED UNDER RECEPTION NO. 1722613 OF SAID RECORDS;
THENCE THE FOLLOWING TWO (2) COURSES ALONG THE EASTERLY LINE OF SAID SUNRISE RIDGE SUBDIVISION FILING NO. 8: 1) 511.39 FEET ALONG THE ARC OF A 1,034.60 FOOT RADIUS CURVE TO THE LEFT, HAVING A CENTRAL ANGLE OF 28°19'14" AND A CHORD THAT BEARS N 58°13'41" E, 506.20 FEET TO A POINT OF COMPOUND CURVATURE;
2) 283.12 FEET ALONG THE ARC OF A 500.00 FOOT RADIUS CURVE TO THE LEFT, HAVING A CENTRAL ANGLE OF 32°26'36" AND A CHORD THAT BEARS N 27°50'47" E, 279.35 FEET TO A POINT ON THE NORTH LINE OF SAID NORTHEAST QUARTER;
THENCE N 89°57'13" E ALONG THE NORTH LINE OF SAID NORTHEAST QUARTER, A DISTANCE OF 115.21 FEET TO THE POINT OF BEGINNING.

CONTAINING A CALCULATED AREA OF 445,104 SQUARE FEET (10.218 ACRES) OF LAND, MORE OR LESS.

TO BE PLATTED AS "COTTAGES AT MESA RIDGE"



VICINITY MAP

SHEET INDEX:

STAKEHOLDERS:

OWNER:	CSJ NO 1 LLC 111 S. TEJON STREET, SUITE 222 COLORADO SPRINGS, CO 80903
DEVELOPER:	GOODWIN KNIGHT 8605 EXPLORER DRIVE, SUITE 250 COLORADO SPRINGS, CO 80920
ATTN:	DAVE MORRISON
APPLICANT:	HR GREEN DEVELOPMENT, LLC 1975 RESEARCH PKWY, SUITE 230 COLORADO SPRINGS, CO 80920
ATTN:	PHIL STUEPFERT, KEN HUHN
SURVEYOR:	BARRON LAND, LLC 2790 N ACADEMY BLVD #311 COLORADO SPRINGS, CO 80917 ATTN: SPENCER BARRON

GENERAL NOTES:

1. ALL CONSTRUCTION WORK SHALL BE COORDINATED WITH FMIC PERSONNEL DURING THE SUMMER MONTHS TO NOT INTERFERE WITH OPERATION OF THE DITCH.
2. THE FOLLOWING ITEMS PROPOSED WITHIN THE FMIC RIGHT OF WAY SHALL BE PERMANENTLY MAINTAINED BY THE APPLICANT:
   A. PRIVATE STORM SEWER
   B. EMERGENCY ACCESS ROAD
   C. PRIVATE ACCESS ROAD (LANDOVER LANE EXTENSION SITE ENTRANCE)
   D. LANDSCAPING AND IRRIGATION ITEMS
   E. FENCES & GATES
3. THE FOLLOWING ITEMS PROPOSED WITHIN THE FMIC RIGHT OF WAY SHALL BE PERMANENTLY MAINTAINED BY THE NOTED AGENCIES NOTED:
   A. SANITARY SEWER WITHIN LANDOVER LANE (FOUNTAIN SANITATION DISTRICT)
   B. WATER LINE WITHIN LANDOVER LANE (EXISTING WATER LINE SUBJECT TO PRIOR AGREEMENTS WITH WIDEFIELD WATER AND SANITATION DISTRICT)

LEGEND

EXISTING / PROPOSED

MATCH LINE
PHASE LINE
SECTION LINE
PROPERTY LINE
EASEMENT LINE
RIGHT OF WAY
CENTERLINE
CHAIN LINK FENCE
WOODEN FENCE
ROD IRON FENCE
GUARDRAIL
CABLE TV
U.G. ELECTRIC
OVERHEAD ELECTRIC
FIBER OPTIC
GAS MAIN
SANITARY SEWER
STORM DRAIN
TELEPHONE
WATER MAIN
SWALE
TRAIL
CURB & GUTTER
DRAINAGE BASIN
INDEX CONTOUR
INTER. CONTOUR
100-YR FLOODPLAIN
FLOODWAY
EDGE OF WETLANDS

DRAINAGE

EXISTING / PROPOSED

DRAINAGE BASIN
BASIN TAG (I.D. / AREA)
DESIGN POINT

STORM SEWER

EXISTING / PROPOSED

MANHOLE
STORM INLET
FLARED END SECTION
RIPRAP

SANITARY SEWER

CLEAN OUT
MANHOLE
PLUG

WATER

FIRE HYDRANT
FIRE DEPT. CONNECTION
GATE VALVE
MANHOLE
METER
TEE
REDUCER

DRY UTILITIES

ELECTRIC METER
ELECTRIC PEDESTAL
ELECTRICAL CABINET
ELECTRIC VAULT
FIBER OPTIC PULL BOX
FIBER OPTIC MANHOLE
FIBER OPTIC PEDESTAL
FIBER OPTIC SIGN
FIBER OPTIC VAULT
GAS METER
GAS SIGN
GAS VAULT
TELEPHONE CABINET
TELEPHONE MANHOLE
TELEPHONE SIGNAL/MAST
TELEPHONE SIGN
TELEPHONE PEDESTAL
TRANSFORMER
LIGHT POLE
FIBER OPTIC VAULT

MISCELLANEOUS

SIGN
BOLLLARD
ACCESSIBLE PARKING

OWNER STATEMENT:

THE UNDERSIGNED OWNER/DEVELOPER AGREES TO INSTALL THE PROPOSED FACILITIES AS DEPICTED ON THESE PLANS. ANY CHANGES REQUIRED DUE TO FIELD CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF FMIC FOR THEIR REVIEW AND COMMENT.

OWNER/DEVELOPER

TITLE:

ADDRESS:

DATE:

ENGINEER'S STATEMENT

THIS STORM SEWER PLAN WAS PREPARED UNDER MY DIRECT SUPERVISION AND IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. I ACCEPT RESPONSIBILITY FOR ANY LIABILITY CAUSED BY ANY NEGLIGENT ACTS, ERROR OR OMISSIONS ON MY PART IN PREPARATION OF THIS STORM SEWER PLAN.

KEN M. HUHN, P.E. DATE
KHUHN@HRGREEN.COM
COLORADO P.E. 0054022

NOT FOR CONSTRUCTION

DRAWN BY: NQJ	JOB DATE: 4/12/2022	BAR IS ONE INCH ON OFFICIAL DRAWINGS. 0 — 1"	
APPROVED: KMH	JOB NUMBER: 200541	IF NOT ONE INCH, ADJUST SCALE ACCORDINGLY.	
CAD DATE: 8/22/2022			
CAD FILE: J:\2020\200541\CAD\Dwgs\C\CD\FMIC\FMIC_Cover			

NO.	DATE	BY	REVISION DESCRIPTION

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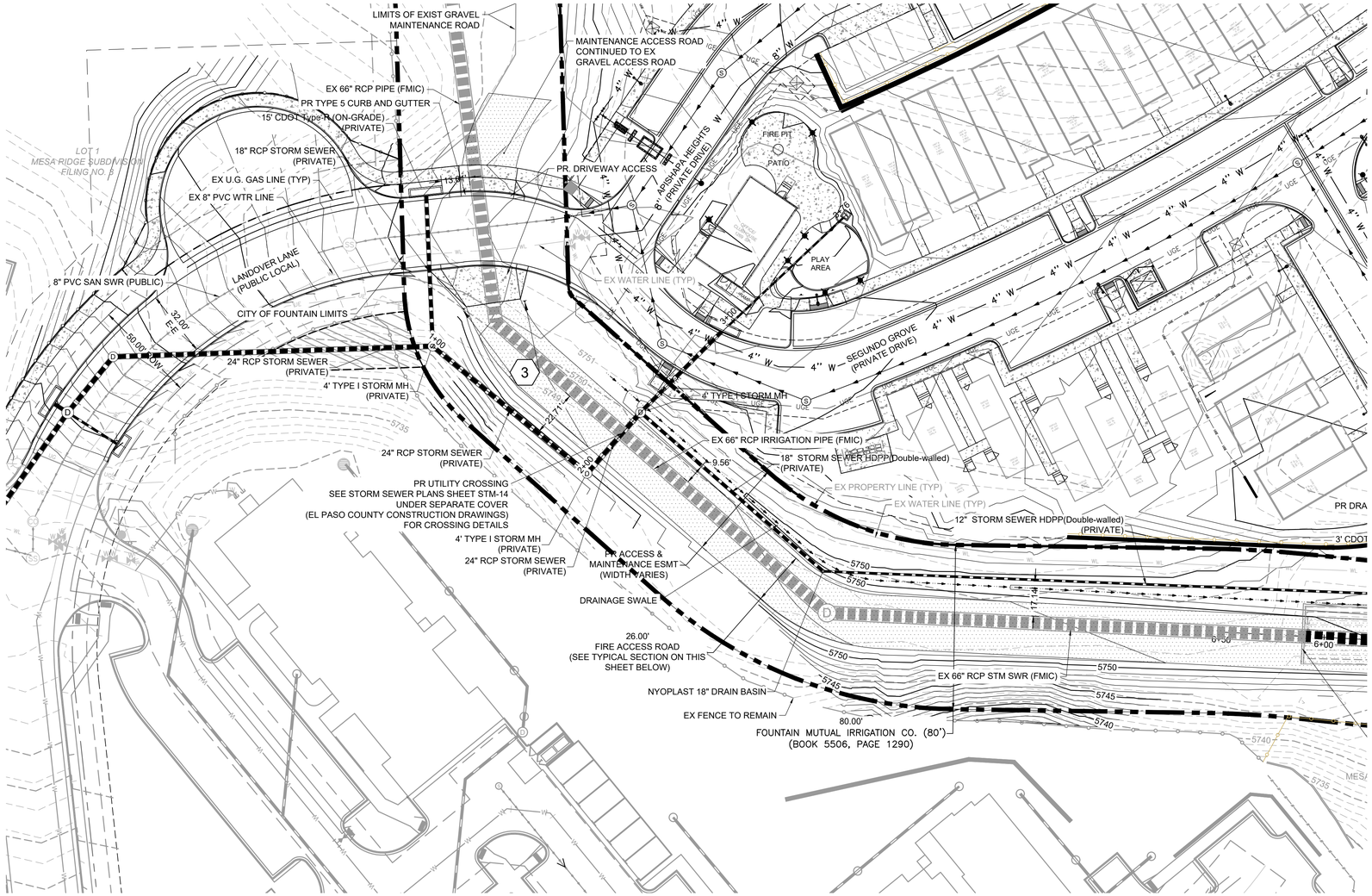
7222 COMMERCE CENTER DR SUITE 220
COLORADO SPRINGS CO 80919
PHONE: 719.300.4140 TOLL FREE: 800.728.7805
FAX: 844.273.1057 | HRGreen.com

THE COTTAGES AT MESA RIDGE
GOODWIN KNIGHT
EL PASO COUNTY, COLORADO

IRRIGATION PIPE CONSTRUCTION DRAWINGS
COVER SHEET

SHEET CV

1

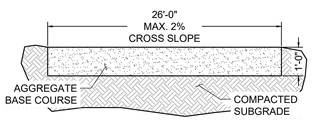


LEGEND:

SIGN LOCATION AS NOTED ON PLAN

3 — EMERGENCY AND AUTHORIZED VEHICLES ONLY

12"x18"



26' FIRE ACCESS ROAD TYPICAL SECTION

SCALE: NTS

NOT FOR CONSTRUCTION

DRAWN BY: NQJ	JOB DATE: 8/22/2022	BAR IS ONE INCH ON OFFICIAL DRAWINGS. 0 — 1"	
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CAD DATE: 8/22/2022			
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NO.	DATE	BY	REVISION DESCRIPTION

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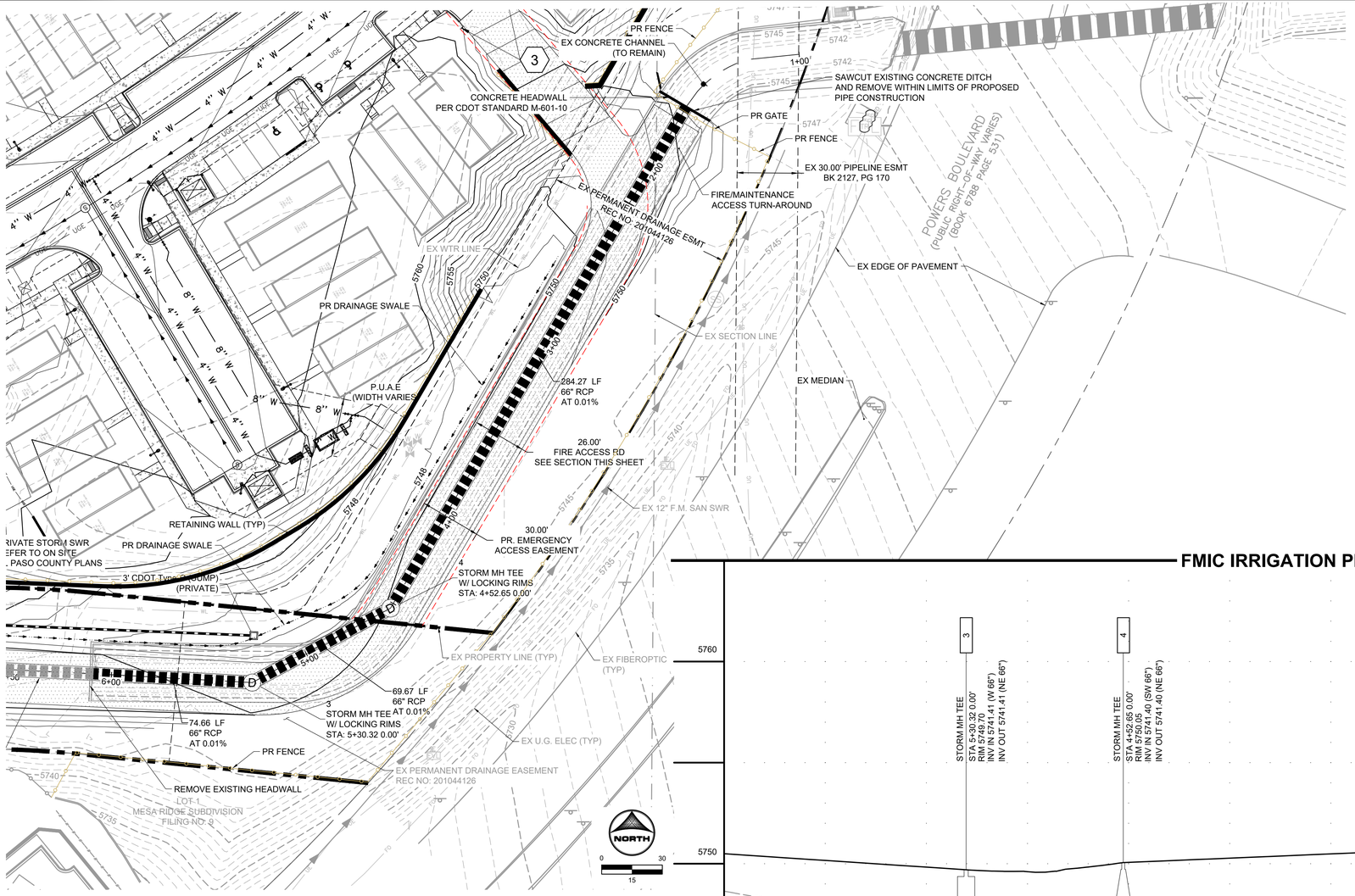
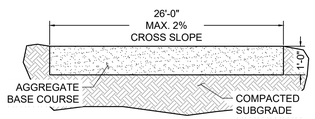
THE COTTAGES AT MESA RIDGE
GOODWIN KNIGHT
EL PASO COUNTY, COLORADO

IRRIGATION PIPE CONSTRUCTION DRAWINGS
STORM PLAN

SHEET STM

2

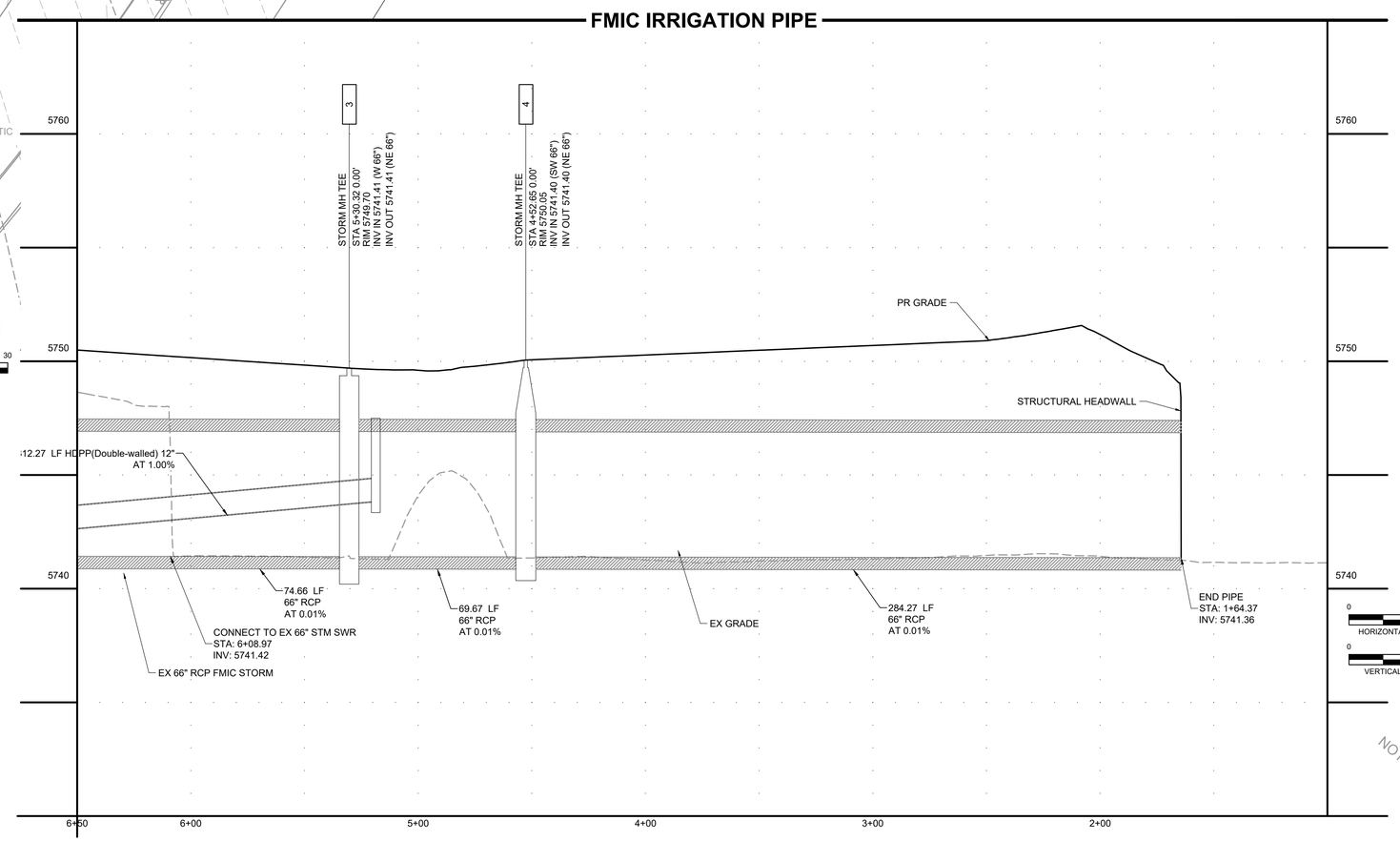




26' FIRE ACCESS ROAD TYPICAL SECTION
SCALE: NTS

LEGEND:
SIGN LOCATION AS NOTED ON PLAN

12"x18"



NOT FOR CONSTRUCTION

DRAWN BY: NQJ	JOB DATE: 8/22/2022	BAR IS ONE INCH ON OFFICIAL DRAWINGS. 0 1" IF NOT ONE INCH, ADJUST SCALE ACCORDINGLY.	
APPROVED: KMH	JOB NUMBER: 200541		
CAD DATE: 8/22/2022			
CAD FILE: J:\2020\200541\CAD\Dwgs\C\CD\FMIC\FMIC_Storm			

NO.	DATE	BY	REVISION DESCRIPTION

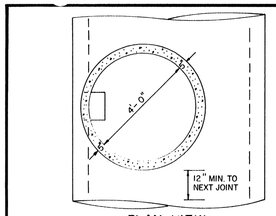
HRGreen
HR GREEN - COLORADO SPRINGS
7222 COMMERCE CENTER DR SUITE 220
COLORADO SPRINGS CO 80919
PHONE: 719.300.4140 TOLL FREE: 800.728.7805
FAX: 844.273.1057 | HRGreen.com

THE COTTAGES AT MESA RIDGE
GOODWIN KNIGHT
EL PASO COUNTY, COLORADO

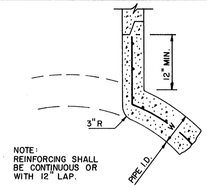
GOODWIN KNIGHT

IRRIGATION PIPE CONSTRUCTION DRAWINGS
STORM SEWER - PLAN & PROFILE

SHEET STM 3



PLAN VIEW
SCALE 3/8" = 1'-0"

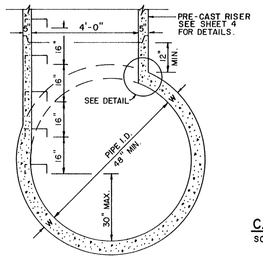


NOTE:
REINFORCING SHALL BE CONTINUOUS OR WITH 12" LAP.

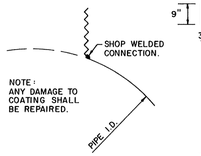
R.C.P. CONNECTION DETAIL
SCALE 3/4" = 1'-0"

NOTES:

1. Type III manholes shall be used only with approval by the City Engineer and only when all of the following conditions are met:
   a. Pipe is 48" or larger inside diameter
   b. No change in pipe size
   c. No change in pipe material
   d. No change in horizontal alignment
   e. Slope is flat and continuous
2. Type III manholes shall be fabricated by the manufacturer/supplier and delivered to the site as a single unit. Field fabrication shall not be permitted.
3. Either ladder or steps shall be installed. Lowest step shall be a maximum of 30" above the invert of the pipe.

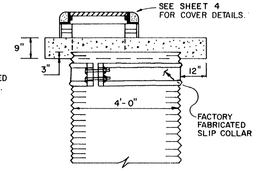


SECTION VIEW
SCALE 3/8" = 1'-0"



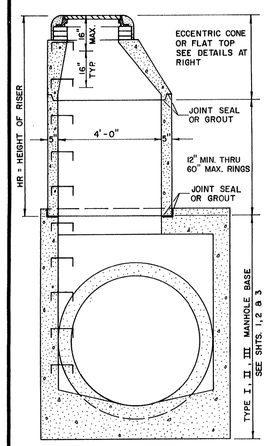
NOTE:
ANY DAMAGE TO COATING SHALL BE REPAIRED.

C.S.P. CONNECTION DETAIL
SCALE 3/4" = 1'-0"

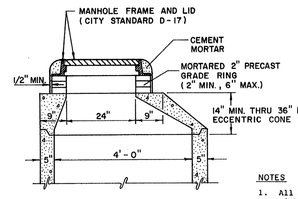


SPECIAL LID FOR USE WITH C.S.P. RISER.
SCALE 3/8" = 1'-0"

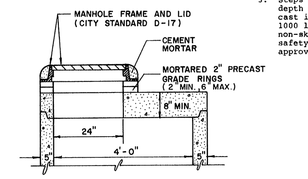
CITY OF COLORADO SPRINGS			
STORM SEWER MANHOLE-TYPE III			
APPROVED BY Gary R. Haynes CITY ENGINEER			
SCALE: AS SHOWN	DATE: JAN. 89	DRAWN: PL.B.	SHEET: D-20C 3 OF 4



SECTION VIEW
SCALE: 3/8" = 1'-0"



ECCENTRIC CONE TOP
(FOR HR > 3' ±) SCALE: 1/2" = 1'-0"



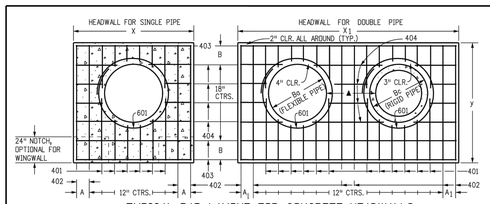
ECCENTRIC FLAT TOP
(FOR HR < 3' ±) SCALE: 1/2" = 1'-0"

NOTES

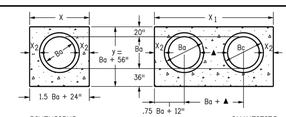
1. All work shall be done in accordance with the standard and supplemental specifications applicable to the project.
2. Precast risers shall conform to ASTM C-478.
3. Steps shall be installed when manhole depth exceeds 30". Steps shall be cast iron or extruded aluminum, 1000 lb. capacity, 12" wide with non-skid grooves and drop front on safety noses, in accordance with approved OSHA requirements.

STORM SEWER MANHOLE PRECAST RISER

CITY OF COLORADO SPRINGS			
STORM SEWER-COVER & RISER			
APPROVED BY Gary R. Haynes CITY ENGINEER			
SCALE: AS SHOWN	DATE: JAN. 89	DRAWN: PL.B	SHEET: D-20D 1 OF 4



TYPICAL BAR LAYOUT FOR CONCRETE HEADWALLS



DIMENSIONS									QUANTITIES			
									CONCRETE		STEEL ■	
Bo IN.	Bc IN.	X FT.-IN.	A IN.	X1 FT.-IN.	A1 IN.	y FT.-IN.	B IN.	X2 IN.	SGL. CU. YD.	DBL. CU. YD.	SGL. LBS.	DBL. LBS.
54	65	8-9	8½	15-6	7	9-2	17	20	2.12	3.55	209	364
60	72	9-6	7	17-0	10	9-8	11	21	2.35	3.99	236	414
66	79	10-3	11½	18-6	7	10-2	14	22	2.60	4.44	249	453
72	86	11-0	10	20-0	10	10-8	17	23	2.85	4.91	270	476
78	93	11-9	8½	21-3	11	11-2	11	24	3.11	5.29	306	527
84	100	12-6	7	22-6	7	11-8	14	25	3.38	5.68	333	572
90	107	13-3	11½	23-9	8½	12-2	17	26	3.66	6.08	335	593
96	114	14-0	10	25-0	10	12-8	11	27	3.94	6.48	379	649
102	121	14-9	8½	26-3	11½	13-2	14	28	4.24	6.89	400	664
108	128	15-6	7	27-6	7	13-8	17	29	4.54	7.30	424	707

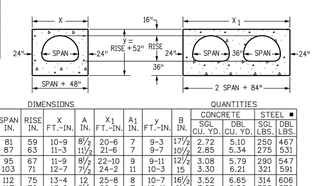
HEADWALL FOR RIGID ROUND PIPE

GENERAL NOTES

1. CONCRETE SHALL BE CLASS B.
2. HEADWALL SHALL BE PERPENDICULAR TO THE PIPE ℄ UNLESS OTHERWISE SHOWN ON THE PLANS. TABULATED DIMENSIONS AND QUANTITIES MUST BE ADJUSTED FOR SKEWED INSTALLATIONS.
3. FOR WINGWALL DETAILS, SEE STANDARD PLAN M-601-20.
4. VOLUME OCCUPIED BY PIPE HAS BEEN DEDUCTED FROM STEEL AND CONCRETE QUANTITIES.
5. EXPOSED CONCRETE CORNERS SHALL BE CHAMFERED ¾ IN.
6. ALL REINFORCING BARS SHALL HAVE A 2 IN. MINIMUM CLEARANCE.

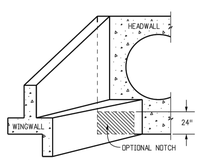
▲ WHEN TWO OR MORE PIPES ARE LAID SIDE BY SIDE, THEY SHALL BE PLACED SO THAT THE ADJACENT PIPES WILL BE ½ INSIDE DIAMETER APART, OR ½ INSIDE SPAN APART, OR 3 FT. APART (INCLUDING WALL THICKNESS), WHICHEVER IS LESS.

■ ADD 0.89 x (X OR X1) (LB.) WHEN APRON IS REQUIRED.

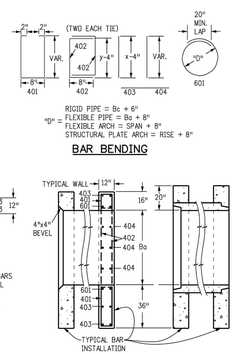


DIMENSIONS									QUANTITIES			
									CONCRETE		STEEL ■	
EQUIV. Bo IN.	SPAN IN.	RISE IN.	X FT.-IN.	A IN.	X1 FT.-IN.	A1 IN.	y FT.-IN.	B IN.	SGL. CU. YD.	DBL. CU. YD.	SGL. LBS.	DBL. LBS.
72	81	59	10-9	8½	20-6	7	9-3	17½	2.72	5.10	250	467
78	87	63	11-3	11½	21-6	7	9-7	10½	2.85	5.34	275	531
84	95	67	11-9	8½	22-10	9	9-11	12½	3.08	5.79	290	547
90	103	71	12-7	7½	24-2	11	10-3	15	3.30	6.21	321	591
96	112	75	13-4	12	25-8	8	10-7	16½	3.52	6.65	314	606
102	117	79	13-9	8½	26-6	7	10-11	9½	3.63	6.86	356	672
108	128	83	14-8	8	28-4	12	11-3	11½	3.96	7.51	376	699

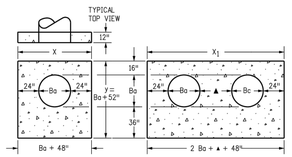
HEADWALL FOR FLEXIBLE PIPE ARCH



FRONT VIEW



BAR BENDING

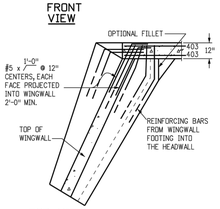


DIMENSIONS									QUANTITIES			
									CONCRETE		STEEL ■	
Bo IN.	X FT.-IN.	A IN.	X1 FT.-IN.	A1 IN.	y FT.-IN.	B IN.			SGL. CU. YD.	DBL. CU. YD.	SGL. LBS.	DBL. LBS.
54	8-6	7	15-3	11½	8-10	15			2.19	3.81	211	358
60	9-0	10	16-6	7	9-4	18			2.38	4.25	217	396
66	9-6	7	17-9	8½	9-10	12			2.58	4.70	252	454
72	10-0	10	19-0	10	10-4	15			2.78	5.17	255	472
78	10-6	7	20-0	10	10-10	18			2.98	5.56	278	499
84	11-0	10	21-0	10	11-4	12			3.19	5.95	297	553
90	11-6	7	22-0	10	11-10	15			3.40	6.36	317	517
96	12-0	10	23-0	10	12-4	18			3.62	6.79	321	597
102	12-6	7	24-0	10	12-10	12			3.84	7.21	364	653
108	13-0	10	25-0	10	13-4	15			4.06	7.63	362	678

HEADWALL FOR FLEXIBLE ROUND PIPE

DIMENSIONS									QUANTITIES			
									CONCRETE		STEEL ■	
EQUIV. Bo IN.	SPAN FT.-IN.	RISE FT.-IN.	X FT.-IN.	A IN.	X1 FT.-IN.	A1 IN.	y FT.-IN.	B IN.	SGL. CU. YD.	DBL. CU. YD.	SGL. LBS.	DBL. LBS.
66	6-1	4-7	10-1	10½	19-2	11	8-11	15½	2.52	4.70	232	424
75	7-0	5-1	11-0	10	21-0	10	9-5	9½	2.80	5.25	282	509
84	7-11	5-7	11-11	9½	22-10	9	9-11	12½	3.08	5.79	291	540
93	8-10	6-1	12-10	9	24-8	8	10-5	15½	3.36	6.33	309	622
102	9-9	6-7	13-9	8½	26-6	7	10-11	9½	3.63	6.86	379	673
111	10-11	7-1	14-11	8½	28-10	9	11-5	12½	4.05	7.67	377	711
120	11-10	7-7	15-10	9	30-8	8	11-11	15½	4.36	8.28	395	731
132	12-10	8-4	16-10	9	32-8	8	12-8	11	4.75	9.03	441	839
141	14-1	8-9	18-1	10½	35-2	11	13-1	13½	5.17	9.86	448	931
150	15-4	9-3	19-4	12	37-8	8	13-7	16½	5.69	10.88	490	953
159	15-10	9-10	19-10	9	38-8	8	14-2	11	5.89	11.25	534	1019

HEADWALL FOR STRUCTURAL PLATE ARCH

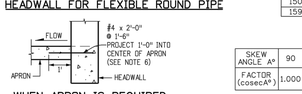


TOP VIEW

WINGWALL CONNECTION

INLET OUTLET
ENDS OF FLEXIBLE PIPE

INLET OUTLET
ENDS OF RIGID PIPE



WHEN APRON IS REQUIRED

SKEW ANGLE A°	90	85	80	75	70	65	60	55	50	45	40	35	30
FACTOR (cosecA°)	1.000	1.004	1.015	1.035	1.064	1.103	1.155	1.221	1.305	1.414	1.556	1.743	2.000

SKEW FACTOR TABLE

Computer File Information	
Creation Date: 07/31/19	
Designer Initials: JBK	R-X
Last Modification Date: 07/31/19	R-X
Detailer Initials: LTA	R-X
CAD Ver.: MicroStation V8 Scale: Not to Scale Units: English	R-X

Sheet Revisions	
Date:	Comments

Colorado Department of Transportation
2829 West Howard Place
CDOT HQ, 3rd Floor
Denver, CO 80204
Phone: 303-757-9021 FAX: 303-757-9868
Project Development Branch JBK

HEADWALL FOR PIPES

Issued by the Project Development Branch: July 31, 2019

STANDARD PLAN NO.
M-601-10
Standard Sheet No. 1 of 1
Project Sheet Number:

DRAWN BY: NQJ	JOB DATE: 8/22/2022	BAR IS ONE INCH ON OFFICIAL DRAWINGS. 0 1" IF NOT ONE INCH, ADJUST SCALE ACCORDINGLY.	
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NO.	DATE	BY	REVISION DESCRIPTION

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THE COTTAGES AT MESA RIDGE
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GOODWIN KNIGHT

IRRIGATION PIPE CONSTRUCTION DRAWINGS
CONSTRUCTION DETAILS

SHEET DT 4