100% CONSTRUCTION DOCUMENTS FOR

ANYTHINK NATURE LIBRARY - INFRASTRUCTURE PHASE

A PARCEL OF LAND IN THE SOUTHEAST QUARTER SECTION 20, TOWNSHIP 1 SOUTH, RANGE 67 WEST OF THE SIXTH PRINCIPAL MERIDIAN, CITY OF THORNTON, COUNTY OF ADAMS, STATE OF COLORADO.

AGENCY CONTACT LIST

OWNER

CITY OF THORNTON (720) 977-6258 9500 CIVIC CENTER DRIVE ATTN: GRANT BLOOM THORNTON, COLORADO 80229

ENGINEER

WARE MALCOMB 900 S. BROADWAY, SUITE 320 DENVER, COLORADO 80209

(303) 561-3333 ATTN: TOM JANSEN

ANYTHINK

ANYTHINK 9500 CIVIC CENTER DRIVE THORNTON, COLORADO 80229 (303) 538-7694

GEOTECHNICAL ENGINEER

GROUND ENGINEERING 41 INVERNESS DRIVE EAST ENGLEWOOD, COLORADO 80112

(303) 289-1989

UTILITIES

XCEL ENERGY (GAS) 550 15TH STREET, SUITE 700 DENVER, COLORADO 80202

(800) 628-1212

COMCAST 965 E. BRIDGE ST. BRIGHTON, CO 80602

BRIGHTON, CO 80602

ASSUME LIABILITY FOR FACILITIES DESIGNED BY OTHERS.

FOR AND ON BEHALF OF WARE MALCOMB

PROJECT MANAGER

(303) 930-2000

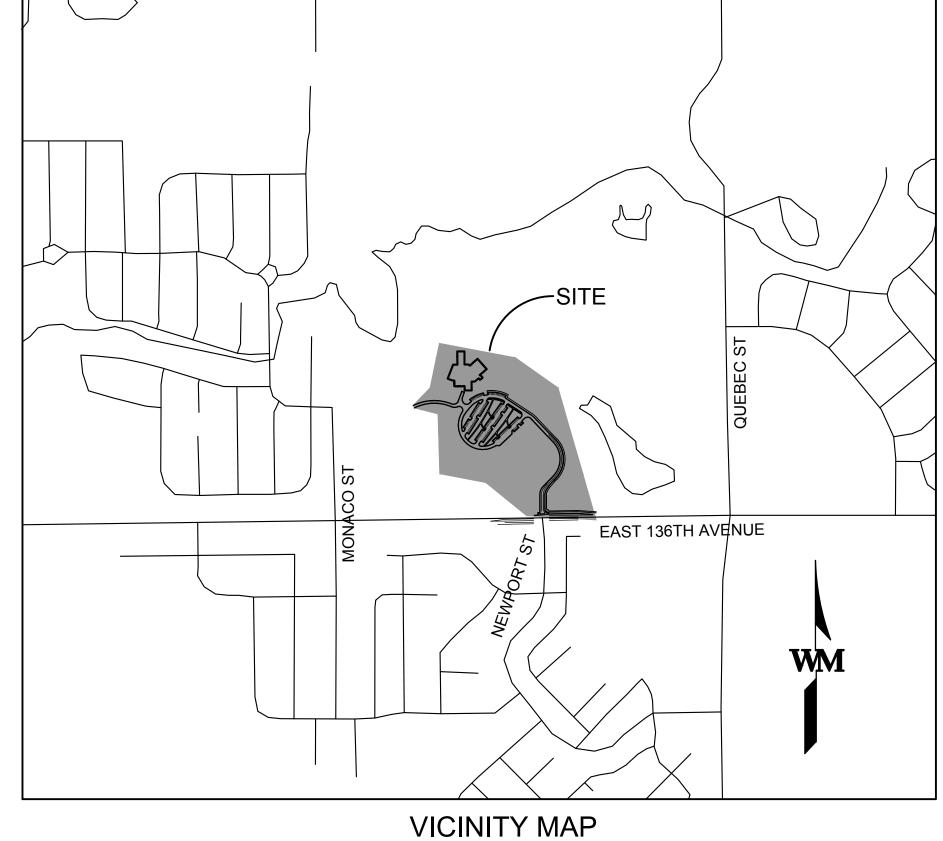
UNITED POWER (ELECTRIC) 500 COOPERATIVE WAY

(303) 659-0551

DATE

DATE

I HEREBY AFFIRM THAT THESE CONSTRUCTION PLANS WERE PREPARED BY ME (OR UNDER MY DIRECT SUPERVISION) FOR THE OWNERS THEREOF IN ACCORDANCE WITH THE PROVISIONS OF CITY OF THORNTON STANDARDS AND SPECIFICATIONS FOR THE DESIGN AND CONSTRUCTION OF PUBLIC IMPROVEMENTS. I UNDERSTAND THAT IT IS THE POLICY OF THE CITY OF THORNTON THAT THE CITY DOES NOT AND WILL NOT



SCALE: 1" = 650'

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PROJECT BENCHMARK

ADAMS COUNTY BENCHMARK NAMED 95.0123 BEING A 3.25" ALUMINUM CAP, LOCATED EAST OF INTERSECTION OF COLORADO BOULEVARD AND EAST 152ND AVENUE.

ELEVATION=5235.84 (NAVD 88 DATUM).

BASIS OF BEARINGS

BEARINGS ARE BASED ON THE SOUTH LINE OF THE SOUTHEAST QUARTER OF SECTION 20, WITH AN ASSUMED BEARING OF NORTH 89°07'24" EAST.

> CONTRACTOR TO FIELD VERIFY LOCATION OF ALL EXISTING UTILITES PRIOR TO CONSTRUCTION

WORK SHALL BE CONSTRUCTED TO CITY OF THORNTON STANDARDS AND SPECIFICATIONS. THIS APPROVAL IS FOR CONFORMANCE WITH THESE STANDARDS AND SPECIFICATIONS AND OTHER CITY REQUIREMENTS. THE DESIGN AND CONCEPT REMAINS THE RESPONSIBILITY OF THE PROFESSIONAL ENGINEER OR LANDSCAPE PROFESSIONAL.

LIBRAR

WARE

OF WARE MALCOMB

JOB NO.:	DCS22-4022
PA / PM:	J. MANN
DRAWN BY:	I. CRAWFORD
DATE:	6/13/2023

ANYTHING REPRESENTATIVE

DATE

MANAGER OF PARKS, PROJECTS, AND PLANNING

JOB NO.: DCS22-4022 PA / PM: J. MANN DRAWN BY: I. CRAWFORE 6/13/2023

GENERAL NOTES:

- 1. THE CONTRACTOR SHALL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS AT AND ADJACENT TO THE JOB SITE; INCLUDING, SAFETY OF PERSONS AND PROPERTY DURING THE PERFORMANCE OF WORK. THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. THE CITY CONSTRUCTION REVIEW OF THE CONTRACTOR'S PERFORMANCE IS NOT INTENDED TO INCLUDE REVIEW OF THE ADEQUACY OF THE CONTRACTOR'S SAFETY MEASURES IN, ON, OR NEAR THE CONSTRUCTION SITE.
- 2. THE TYPE, SIZE, LOCATION, AND NUMBER OF ALL KNOWN UNDERGROUND UTILITIES ARE APPROXIMATE WHEN SHOWN ON THE DRAWINGS. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE EXISTENCE AND LOCATION OF ALL UNDERGROUND UTILITIES ALONG THE ROUTE OF THE WORK. LOCATION OF EXISTING UTILITIES SHALL BE VERIFIED BY CONTRACTOR PRIOR TO DATE OF CONSTRUCTION. FOR INFORMATION CONTACT: UTILITY NOTIFICATION CENTER OF COLORADO (UNCC) - 1-800-922-1987. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY SIZE AND HORIZONTAL AND VERTICAL LOCATIONS OF EXISTING FACILITIES PRIOR TO CONSTRUCTION AND NOTIFY THE CITY OF ANY DISCREPANCIES.
- 3. MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE CITY OF THORNTON STANDARDS AND PROJECT SPECIFICATIONS (COLLECTIVELY "SPECIFICATIONS") FOR THE DESIGN AND CONSTRUCTION OF PUBLIC AND PRIVATE IMPROVEMENTS AND WORK SHALL BE SUBJECT TO INSPECTION AND APPROVAL BY AUTHORIZED CITY OF THORNTON PERSONNEL
- 4. ALL TRENCHES SHALL BE ADEQUATELY SUPPORTED AND THE SAFETY OF WORKERS PROVIDED FOR AS REQUIRED BY THE MOST RECENT OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) "SAFETY AND HEALTH REGULATIONS FOR CONSTRUCTION." THESE REGULATIONS ARE DESCRIBED IN SUBPART P, PART 1926 OF THE CODE OF FEDERAL REGULATIONS. SHEETING AND SHORING SHALL BE UTILIZED WHERE NECESSARY TO PREVENT ANY EXCESSIVE WIDENING OR SLOUGHING OF THE TRENCH WHICH MAY BE DETRIMENTAL TO HUMAN SAFETY, TO THE PIPE BEING PLACED, TO TREES, OR TO ANY EXISTING STRUCTURE WHERE EXCAVATIONS ARE MADE UNDER SEVERE WATER CONDITIONS. THE CONTRACTOR MAY BE REQUIRED TO USE AN APPROVED PILING INSTEAD OF SHEETING AND SHORING.
- 5. THE CONTRACTOR SHALL FURNISH THE ENGINEER THE "AS CONSTRUCTED" LOCATIONS OF FACILITIES INSTALLED AND, THIS IN TURN, SHALL BE SUBMITTED TO THE CITY OF THORNTON ON AS-BUILT ELECTRONIC FILES PREPARED BY THE ENGINEER.
- 6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANING NEARBY PUBLIC STREETS OF MUD OR DEBRIS DUE TO CONSTRUCTION ACTIVITY INITIATED BY SAID CONTRACTOR ON A DAILY BASIS OR AS OTHERWISE DIRECTED BY AUTHORIZED CITY PERSONNEL.
- 7. PRIOR TO THE BEGINNING OF WORK, A PRE-CONSTRUCTION CONFERENCE SHALL BE HELD BETWEEN THE CITY, THE CONTRACTOR, THE DESIGNATED ON-SITE FIELD REPRESENTATIVE, THE CONSULTING ENGINEER OR LANDSCAPE PROFESSIONAL, AND ANY OTHER ENTITIES INVOLVED IN THE CONSTRUCTION.
- 8. THE CONTRACTOR SHALL FURNISH REASONABLE AID AND ASSISTANCE REQUIRED BY PROJECT MANAGER FOR THE PROPER EXAMINATION OF THE MATERIALS AND WORK. WORK SHALL BE PERFORMED IN ACCORDANCE WITH ACCEPTED WORKMANSHIP PRACTICES AND THE CITY OF THORNTON STANDARDS AND SPECIFICATIONS FOR THE DESIGN AND CONSTRUCTION OF PUBLIC AND PRIVATE IMPROVEMENTS. ANY WORK NOT ACCEPTED BY THE PROJECT MANAGER SHALL BE REDONE UNTIL COMPLIANCE WITH THESE STANDARDS IS ACHIEVED. INSTRUCTIONS GIVEN BY THE PROJECT MANAGER RELATING TO QUALITY OF MATERIALS AND WORKMANSHIP MUST BE OBEYED AT ONCE BY THE CONTRACTOR. PROJECT MANAGER SHALL NOT SUPERVISE SET OUT WORK, OR GIVE LINE AND GRADE STAKES.
- 9. THE MATERIALS USED IN PROJECTS SHALL BE NEW AND SUBJECT TO THE INSPECTION AND APPROVAL OF THE INSPECTOR AT ALL TIMES. THE INSPECTOR HAS THE RIGHT TO PERFORM ANY TESTING DEEMED NECESSARY TO ENSURE COMPULANCE OF THE MATERIAL WITH THESE STANDARDS NO MATERIAL SHALL BE USED BEFORE BEING INSPECTED AND APPROVED BY THE INSPECTOR. FAILURE OR NEGLECT ON THE PART OF THE INSPECTOR TO CONDEMN OR REJECT INFERIOR MATERIALS OR WORK SHALL NOT BE CONSTRUED TO IMPLY THEIR ACCEPTANCE SHOULD THEIR INFERIORITY BECOME EVIDENT AT ANY TIME PRIOR TO FINAL ACCEPTANCE OF THE WORK. INSPECTORS HAVE THE AUTHORITY TO REJECT DEFECTIVE OR INFERIOR MATERIALS AND/OR DEFECTIVE WORKMANSHIP AND TO SUSPEND WORK UNTIL SUCH TIME AS THE CONTRACTOR CORRECT THE DISCREPANCIES IN QUESTION.
- 10. WHENEVER DEFECTIVE MATERIALS AND WORK ARE REJECTED. THE CONTRACTOR SHALL PROMPTLY REMOVE SUCH DEFECTIVE MATERIALS AND CONSTRUCTION FROM THE JOB SITE AND REPLACE ALL DEFECTIVE PORTIONS TO THE SATISFACTION OF DEVELOPMENT ENGINEERING. IN THE EVENT THE CONTRACTOR FAILS TO REMOVE REJECTED ITEMS FROM THE JOB SITE WITHIN A REASONABLE LENGTH OF TIME, PROJECT MANAGER MAY ARRANGE FOR SUCH REMOVAL AT THE EXPENSE OF THE CONTRACTOR.
- 11. INSPECTION SHALL NOT RELIEVE THE CONTRACTOR FROM ANY OBLIGATION TO PERFORM THE WORK STRICTLY IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS OR ANY MODIFICATIONS THEREOF. WORK NOT SO CONSTRUCTED SHALL BE REMOVED AND CORRECTED BY THE CONTRACTOR AT HIS SOLE EXPENSE, WHENEVER SO ORDERED BY PROJECT MANAGER, WITHOUT REFERENCE TO ANY PREVIOUS ERROR OR OVERSIGHT IN INSPECTION.
- 12. IN THE EVENT ONE OR MORE INSPECTORS REPRESENTING PRIVATE CONSULTING ENGINEERING FIRMS ARE ALSO INSPECTING A PROJECT ALONG WITH THE PROJECT MANAGER, THE INSTRUCTIONS GIVEN BY THE PROJECT MANAGER SHALL PREVAIL IN THE EVENT OF CONFLICTING INSTRUCTIONS.
- 13. THE WORK SHALL BE SURVEYED AND STAKED UNDER THE SUPERVISION OF A LICENSED LAND SURVEYOR IN ACCORDANCE WITH THE APPROVED PLANS.
- 14. CONSTRUCTION SHALL ADHERE TO THE FOLLOWING SEQUENCE UNLESS OTHERWISE SPECIFIED BY THE PROJECT MANAGER: SANITARY SEWER INSTALLATION, WATER MAIN INSTALLATION, CURB AND GUTTER INSTALLATION, WATER SERVICE INSTALLATION.
- 15. COMPACTION OF ALL TRENCHES MUST BE ATTAINED AND COMPACTION TEST RESULTS SUBMITTED TO THE ENGINEER AND THE CITY OF THORNTON PRIOR TO FINAL ACCEPTANCE
- 16. ALL WORK, INCLUDING CORRECTION WORK, SHALL BE INSPECTED BY A CITY REPRESENTATIVE WHO SHALL HAVE THE AUTHORITY TO HALT CONSTRUCTION WHEN STANDARD CONSTRUCTION PRACTICES ARE NOT BEING ADHERED TO. THE CONTRACTOR SHALL REGULARLY PATROL THE PUBLIC LANDS ADJACENT TO THE DEVELOPMENT TO REMOVE CONSTRUCTION DEBRIS AND KEEP THE SITE CLEAN AND SAFE.
- 17. ALL SITE GRADING (EXCAVATION, EMBANKMENT, AND COMPACTION) SHALL CONFORM TO THE RECOMMENDATIONS OF THE LATEST SOILS INVESTIGATION FOR THIS PROPERTY AND SHALL FURTHER BE IN CONFORMANCE WITH THE CITY OF THORNTON STANDARDS AND SPECIFICATIONS FOR THE DESIGN AND CONSTRUCTION OF PUBLIC AND PRIVATE IMPROVEMENTS". LATEST EDITION, A STATE STORMWATER DISCHARGE PERMIT SHALL BE OBTAINED PRIOR TO ANY GRADING BEING PERFORMED ON SITES LARGER THAN 1 ACRE IN SIZE. THESE PERMITS CAN BE OBTAINED FROM THE STATE WATER QUALITY CONTROL DIVISION (303-692-3500).
- 18. NATURAL VEGETATION SHALL BE RETAINED AND PROTECTED WHEREVER POSSIBLE. EXPOSURE OF SOIL TO EROSION BY REMOVAL OR DISTURBANCE OF VEGETATION SHALL BE LIMITED TO THE AREA REQUIRED FOR IMMEDIATE CONSTRUCTION OPERATION AND FOR THE SHORTEST PRACTICAL PERIOD OF TIME
- 19. TOPSOIL SHALL BE STOCKPILED TO THE EXTENT PRACTICABLE ON THE SITE FOR USE ON AREAS TO BE REVEGETATED. ANY AND ALL STOCKPILES SHALL BE LOCATED AND PROTECTED FROM EROSIVE ELEMENTS.
- 20. AT ALL TIMES, THE PROPERTY SHALL RE MAINTAINED AND/OR WATERED TO PREVENT WIND-CALISED EROSION, EARTHWORK OPERATIONS SHALL RE DISCONTINUED WHEN DUST SIGNIFICANTLY IMPACTS ADJACENT PROPERTY. IF EARTHWORK IS COMPLETE OR DISCONTINUED AND DUST FROM THE SITE CONTINUES TO CREATE PROBLEMS, THE CONTRACTOR SHALL IMMEDIATELY INSTITUTE MITIGATIVE MEASURES AND SHALL CORRECT DAMAGE TO ADJACENT
- 21. PERMANENT SLOPES SHALL NOT EXCEED 4:1 (H:V) IN AREAS TO BE SEEDED OR SODDED. RETAINING WALLS SHALL BE REVIEWED AND APPROVED BY SEPARATE APPLICATION TO THE PROJECT MANAGER DIVISION.
- 22. THIS EROSION AND SEDIMENT CONTROL PLAN HAS BEEN SUBMITTED TO THE CITY OF THORNTON AND IS IN GENERAL CONFORMANCE WITH THE CITY'S EROSION CONTROL STANDARDS. ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURE MAY BE REQUIRED OF THE OWNER AND HIS OR HER AGENTS DUE TO UNFORESEEN EROSION PROBLEM OR IF THE PROPOSED EROSION CONTROL MEASURES DO NOT FUNCTION AS INTENDED. THE REQUIREMENTS OF THIS EROSION CONTROL PLAN AND THE OBLIGATION OF THE LANDOWNER SHALL RUN WITH THE LAND UNTIL SUCH TIME AS THE EROSION CONTROL PLAN IS PROPERLY COMPLETED, OFFICIALLY MODIFIED, OR VOIDED.
- 23. INSTALLATION OF WATER MAINS SHALL NOT BE PERMITTED UNTIL ALL COMPACTION RESULTS FOR SANITARY SEWERS HAVE BEEN SUBMITTED TO AND APPROVED BY THE CITY, ALL DESIGN SLOPES FOR SANITARY SEWER INSTALLATIONS HAVE BEEN VERIFIED AND APPROVED BY THE CITY, AND ALL APPLICABLE TESTING PROCEDURES HAVE BEEN CONDUCTED AND APPROVED IN WRITING.
- 24. NEW WATER MAINS 12 INCHES OR LESS SHALL BE AWWA STANDARD C-900-07 PVC DR -25 PRESSURE PIPE. WATER MAINS LARGER THAN 12 INCHES SHALL MEET AWWA C-905 PVC DR-21 OR DR-18 AS DETERMINED BY THE PROJECT MANAGER. HYDRANT LEADS SHALL BE DR-18.
- 25. WATER MAINS SHALL BE LAID IN CONFORMANCE WITH THE LATEST EDITION OF THE CITY OF THORNTON STANDARDS AND SPECIFICATIONS FOR THE DESIGN AND CONSTRUCTION OF PUBLIC AND PRIVATE IMPROVEMENTS AND SHALL BE SUBJECT TO CITY INSPECTION AND APPROVAL
- 26. FIRE HYDRANTS SHALL BE LIMITED TO THE FOLLOWING MANUFACTURERS ONLY AND SHALL BE PAINTED ACCORDING TO THE LATEST EDITION OF THE CITY OF THORNTON STANDARDS AND SPECIFICATIONS FOR THE DESIGN AND CONSTRUCTION OF PUBLIC AND PRIVATE IMPROVEMENTS PRIOR TO ACCEPTANCE.

MUELLER COMPANY - 5-1/4" CENTURION WATEROUS COMPANY - MODEL WB-67

EARTHWORK PROPOSED SURFACE - EXISTING SURFACE CUT: 6,909.44 CY FILL: 170.89 CY NET: 6,738.55 CY <CUT>

ADDITIONAL EXCAVATION SIDEWALKS: 154.55 CY PAVEMENTS: 497.75 CY BASE COURSE: 995.49 CY

UNCLASSIFIED EXCAVATION (COMPLETE IN PLACE): 8,386.34 CY

EARTHWORK NUMBERS ARE CONCEPTUALLY ESTIMATED. THESE ESTIMATIONS DO NOT TAKE INTO ACCOUNT SWELLING, COMPACTION, ETC.

- 27. THERE SHALL BE A MINIMUM OF FOUR AND ONE HALF (4.5) FEET OF COVER FROM FINISHED GRADE TO THE TOP OF WATERLINES.
- 28. BEDDING AND BACKFILL MATERIALS FOR BOTH WATER AND SEWER SHALL CONFORM TO THE LATEST EDITION OF THE CITY OF THORNTON STANDARDS AND SPECIFICATIONS FOR THE DESIGN AND CONSTRUCTION OF PUBLIC AND PRIVATE IMPROVEMENTS.
- 29. THRUST BLOCKS SHALL BE PLACED AT FITTINGS, TEES, BENDS, CROSSES, PLUGS, ETC., IN ACCORDANCE WITH THE LATEST EDITION OF THE CITY OF THORNTON STANDARDS AND SPECIFICATIONS FOR THE DESIGN AND CONSTRUCTION OF PUBLIC AND PRIVATE IMPROVEMENTS.
- 30. IN ALL CASES, 10 FEET OF HORIZONTAL DISTANCE, AS MEASURED FROM EDGE OF PIPE TO EDGE OF PIPE, SHALL BE MAINTAINED BETWEEN WATER AND
- 31. CONTRACTOR SHALL NOTIFY ALL RESIDENTS AND/OR BUSINESSES IN WRITING 48 HOURS PRIOR TO ANY SHUT-OFF IN SERVICE. THE NOTICES MUST HAVE CONTRACTOR'S PHONE NUMBER AND NAME OF CONTACT PERSON, AND EMERGENCY PHONE NUMBER FOR AFTER HOURS CALLS. ALL SHUT-OFF'S MUST BE APPROVED BY THE CITY'S INFRASTRUCTURE DEPARTMENT, AND CITY VALVES AND APPURTENANCES SHALL BE OPERATED BY CITY PERSONNEL, UNLESS WRITTEN PERMISSION IS GIVEN OTHERWISE.
- 32. RIM ELEVATIONS OF MANHOLE SHOWN ON THE PLAN AND PROFILE SHEETS ARE APPROXIMATE ONLY AND ARE NOT TO BE TAKEN AS FINAL ELEVATIONS. THE PIPELINE CONTRACTOR SHOULD ALLOW APPROXIMATELY THE TOP ONE (1) FOOT OF RIM ELEVATION TO BE ADJUSTED EITHER UP OR DOWN IN ORDER TO MATCH FINAL PAVEMENT ELEVATION. THE MAXIMUM ADJUSTMENT TO FINAL GRADE IS 12 INCHES WITH CONCRETE RINGS.
- 33. DURING CONSTRUCTION, CARE MUST BE TAKEN TO AVOID ANY GROUND WATER, STORM WATER, CONSTRUCTION DEBRIS, SOIL, OR ANY OTHER FOREIGN MATERIALS FROM ENTERING ANY ACTIVE CITY OF THORNTON SEWER. THE USE OF THE SANITARY SEWER SYSTEM FOR THE PURPOSES OF DEWATERING
- 34. ALL CONSTRUCTION ACTIVITIES DEWATERING MUST COMPLY WITH THE STATE OF COLORADO PERMITTING PROCESS FOR "STORMWATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY." FOR INFORMATION, PLEASE CONTACT COLORADO DEPARTMENT OF HEALTH, WATER QUALITY CONTROL
- 35. AFTER ANY OVERLAY OF AN EXISTING ROADWAY, WHERE CITY UTILITIES ARE PRESENT, THE CONTRACTOR SHALL OPEN ALL MANHOLES AND VALVE BOXES FOLLOWING THE PAVING OPERATION TO ENSURE THAT MANHOLE AND VALVES WERE NOT PAVED OVER NOR FILLED WITH ASPHALT.
- 36. WHEN AN EXISTING ASPHALT STREET IS CUT, THE STREET MUST BE RESTORED TO A CONDITION EQUAL TO OR BETTER THAN ITS ORIGINAL CONDITION. THE EXISTING STREET CONDITION SHALL BE DOCUMENTED BY THE CITY OF THORNTON'S CONSTRUCTION INSPECTOR BEFORE ANY CUTS ARE MADE. PATCHING SHALL BE DONE IN CONFORMANCE WITH THE CITY OF THORNTON STANDARDS AND SPECIFICATIONS FOR THE DESIGN AND CONSTRUCTION OF PUBLIC AND PRIVATE IMPROVEMENTS. THE FINISHED PATCH SHALL BLEND SMOOTHLY INTO THE EXISTING SURFACE. ALL LARGE PATCHES SHALL BE PAVED WITH AN ASPHALT LAY-DOWN MACHINE. IN STREETS WHERE MORE THAN ONE CUT IS MADE, AN OVERLAY OF THE ENTIRE STREET WIDTH, INCLUDING THE PATCHED AREAS, MAY BE REQUIRED. THE DETERMINATION OF NEED FOR A COMPLETE OVERLAY SHALL BE MADE BY THE PROJECT
- 37. PAVING SHALL NOT START UNTIL A GEOTECHNICAL REPORT AND PAVEMENT DESIGN HAVE BEEN APPROVED BY THE CITY OF THORNTON'S DEVELOPMENT ENGINEERING DIVISION AND SUB-GRADE COMPACTION TEST AND PROOF ROLL HAVE BEEN PERFORMED AND THE RESULTS HAVE MET WITH THE APPROVAL OF THE CITY OF THORNTON. THE PAVEMENT DESIGN REPORT MUST BE SUBMITTED THREE (3) WEEKS PRIOR TO THE ANTICIPATED
- 38. ALL DAMAGED EXISTING CURB, GUTTER, AND SIDEWALK SHALL BE REPAIRED PRIOR TO ACCEPTANCE OF COMPLETED IMPROVEMENTS.
- 39. ALL CURB RETURNS WITHIN PUBLIC RIGHT-OF-WAY SHALL BE CONSTRUCTED WITH SIDEWALK RAMPS IN ACCORDANCE WITH THE CITY OF THORNTON STANDARDS AND SPECIFICATIONS FOR THE DESIGN AND CONSTRUCTION OF PUBLIC AND PRIVATE IMPROVEMENTS. ALL SIDEWALK RAMPS SHALL INCLUDE A TRUNCATED DOME DETECTABLE WARNING PATTERN AS SHOWN ON THE DETAIL SHEETS.
- 40. THE CONTRACTOR SHALL PROVIDE, ERECT AND MAINTAIN PROPER TRAFFIC CONTROL DEVICES UNTIL THE SITE IS OPEN TO TRAFFIC. THE CONTRACTOR SHALL SUBMIT A TRAFFIC CONTROL PLAN TO THE CITY OF THORNTON FOR APPROVAL AND OBTAIN A TRAFFIC CONTROL PERMIT PRIOR TO
- 41. REPAIR OF ANY DAMAGE TO EXISTING IMPROVEMENTS OR LANDSCAPING IS THE RESPONSIBILITY OF THE CONTRACTOR.
- 42. ALL ELEVATIONS ARE FLOWLINE UNLESS OTHERWISE NOTED.
- 43. ALL CURB INLETS SHALL BE INSTALLED IN ACCORDANCE WITH COLORADO DEPARTMENT OF TRANSPORTATION STANDARD PLAN NO. M-604-12 ON PLAN SHEET DT07. ALL INLETS ADJACENT TO RAISED INTERSECTIONS SHALL BE INSTALLED PER CITY OF THORNTON STANDARD DETAIL 500-22. NOTE THAT ALL ADJACENT INLETS SHALL HAVE 4" THROATS IN LIEU OF 6" THROATS.
- 44. SHEETS REFER TO FUTURE PHASE WORK TO BE COMPLETED "BY OTHERS". WARE MALCOMB TO COMPLETE FUTURE PHASE WORK.
- 45. REFER TO THE GEOTECHNICAL REPORT FOR OVER EXCAVATION REQUIREMENTS, GROUND WATER, PAVEMENT SECTIONS, ETC.

TRAFFIC NOTES:

- A. NEW TRAFFIC SIGNAL INSTALLATIONS
- 1. CONDUIT, POLE, PULL BOXES AND CONTROLLER LOCATIONS ARE APPROXIMATE, EXACT LOCATIONS SHALL BE MARKED BY THE CONTRACTOR AND APPROVED IN THE FIELD BY THE CITY.
- 2. ALL EXISTING UTILITY LOCATIONS ARE APPROXIMATE. THE CONTRACTOR SHALL FIELD VERIFY THE EXACT LOCATION OF ALL UTILITIES BEFORE COMMENCING WORK AND AGREES TO BE FULLY RESPONSIBLE FOR ANY DAMAGES WHICH MAY OCCUR BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES
- 3. EXCEPT AS MODIFIED IN THE PLANS, ALL WORK SHALL BE IN ACCORDANCE WITH THE CITY OF THORNTON'S STANDARDS AND SPECIFICATIONS FOR THE DESIGN AND CONSTRUCTION OF PUBLIC AND PRIVATE IMPROVEMENTS. THE CONTRACTOR SHALL CONTACT THE PROJECT MANAGER A MINIMUM OF 48 HOURS AND A MAXIMUM OF 96 HOURS PRIOR TO STARTING TRAFFIC SIGNAL CONSTRUCTION.
- 4. THE CONTRACTOR SHALL SUBMIT A TRAFFIC CONTROL PLAN FOR CONSTRUCTION TO THE CITY WITH THE PERMIT APPLICATION. A PUBLIC RIGHT OF WAY WORK PERMIT WILL NOT BE ISSUED WITHOUT AN APPROVED TRAFFIC CONTROL PERMIT FOR TRAFFIC CONTROL DURING CONSTRUCTION.
- 5. UPON COMPLETION OF WORK, THE CONTRACTOR SHALL SUBMIT RECORD DRAWINGS, CORRECTED PLANS AND ANY ADDITIONAL DATA REQUIRED BY THE CITY SHOWING IN DETAIL ALL CONSTRUCTION CHANGES.
- 6. ALL SIGNAL HEADS SHALL BE POLYCARBONATE TYPE AND BLACK IN COLOR.
- 7. ALL SIGNAL INDICATIONS AND LUMINARIES SHALL BE APPROVED LED TYPE.
- 9. ALL SIGNAL HEADS SHALL BE WIRED SEPARATELY FROM THE SIGNAL HEAD TO HAND HOLE ABOVE GRADE AT BASE OF SIGNAL POLE WITH NO OVERHEAD
- 10. ALL NEW SIGNAL HEADS AND ALL RESET SIGNAL HEADS SHALL BE POSITIONED IN THE CENTER OF THE LANE.
- 11. INTERNALLY ILLUMINATED STREET NAME SIGNS SHALL BE APPROVED LED TYPE AND MOUNTED ON THE MAST ARM AT A MINIMUM OF TWO (2) FEET FROM THE SIGNAL POLE. CITY OF THORNTON - STANDARDS AND SPECIFICATIONS REVISED: OCTOBER 2012 700-2.
- 12. WHEN THE PROJECT IS COMPLETE, TWO (2) KEYS FOR EACH CONTROLLER CABINET AND POLICE PANEL SHALL BE DELIVERED TO THE CITY OF THORNTON TRAFFIC ENGINEERING. THE INSTRUCTION MANUAL FOR THE CONTROLLER SHALL BE LEFT INSIDE THE CONTROLLER CABINET.
- B. MODIFIED TRAFFIC SIGNAL INSTALLATIONS

8. CABINET FOUNDATIONS SHALL BE CONCRETE.

- 1. ALL SALVAGED SIGNAL EQUIPMENT SHALL BE DELIVERED TO THE INFRASTRUCTURE MAINTENANCE CENTER, 12450 N. WASHINGTON STREET.
- 2. IF AN EXISTING TRAFFIC SIGNAL MUST BE TURNED OFF, TWO (2) WEEKS MINIMUM NOTICE SHALL BE GIVEN THE CITY AND ARRANGEMENTS MADE AT THE EXPENSE OF THE CONTRACTOR FOR POLICE OFFICERS TO DIRECT TRAFFIC IN THE INTERSECTION.

- 1. ALL TRAFFIC CONTROL SIGNING SHALL CONFORM TO SECTION 704 OF THESE STANDARDS AND SPECIFICATIONS.
- 2. WHEN SIGN POLES ARE TO BE INSTALLED IN AN AREA THAT WILL BE SURROUNDED BY CONCRETE, AN EIGHT (8) INCH DIAMETER SLEEVE SHALL BE INSTALLED TO PROVIDE A SPACE TO INSTALL THE SIGN POLE BASE.
- 3. MOUNTING ORDER OF SIGNS ON SIGN POLE FROM TOP TO BOTTOM: DEAD END PLAQUES, STREET NAME SIGNS, OTHER DEAD END PLAQUES AND STREET NAME SIGNS SHALL BE MOUNTED USING BOLTS ONLY. ALL OTHER SIGNS SHALL BE INSTALLED WITH A BOLT, WASHER AND NUT FOR THE TOP HOLE AND A DRIVE RIVET FOR THE BOTTOM HOLE.
- 4. ALL SIGNS SHALL BE FABRICATED USING 3M DIAMOND GRADE RETRO-REFLECTIVE SHEETING, OR APPROVED EQUAL. ALL SIGNS SHALL HAVE A 3M #1160 PROTECTIVE CLEAR OVERLAY (GRAFFITI PROTECTION), OR APPROVED EQUAL, APPLIED TO THE FACE OF THE SIGN.
- 5. ALL STOP SIGNS AND STREET NAME SIGNS SHALL BE INSTALLED AS PER DETAIL 700-12.
- 6. ALL SALVAGED SIGNS SHALL BE DELIVERED TO THE INFRASTRUCTURE MAINTENANCE CENTER, 12450 N. WASHINGTON STREET.
- D. PAVEMENT MARKING INSTALLATIONS
- 1. ALL PAVEMENT MARKINGS SHALL BE FIELD MARKED AND SHALL BE APPROVED IN THE FIELD BY THE PROJECT MANAGER BEFORE INSTALLATION OF
- 2. ALL MATERIAL SHALL BE INSTALLED AS PER THE MANUFACTURER'S RECOMMENDATIONS AND CITY OF THORNTON STANDARDS AND SPECIFICATIONS FOR THE DESIGN AND CONSTRUCTION OF PUBLIC AND PRIVATE IMPROVEMENTS.
- 3. PAINT SHALL NOT BE USED FOR PERMANENT MARKINGS.

ABBREVIATIONS ACCESSIBLE PARKING PROPERTY LINE **ASSEMBLY** PCC POINT OF COMPOUND CURVATURE **BENCHMARK** POINT OF CURB RETURN **BLOWOFF** POINT OF REVERSE CURVATURE CL CENTERLINE POINT OF TANGENCY DIA / Ø DIAMETER POLYVINYL CHLORIDE PIPE DIP **DUCTILE IRON PIPE** PVC / PVT POINT OF VERTICAL CURVE / VERTICAL TANGENCY ELEVATION POINT OF VERTICAL INTERSECTION EG **EXISTING GRADE** RADIUS EOA RCP **EDGE OF ASPHALT** REINFORCED CONCRETE PIPE EOC EDGE OF CONCRETE RIGHT OF WAY ROW FSMT FASEMENT RIGHT EX **EXISTING** SANITARY SEWER SERVICE FF FINISHED FLOOR SANITARY SEWER FG FINISHED GRADE SILT FENCE FIRE HYDRANT SSMH SANITARY SEWER MANHOLE FLOW LINE STA STATION GRADE AT BOTTOM OF WALL STMH STORM SEWER MANHOLE HYDRAULIC GRADE LINE FLARED END SECTION HOR HORIZONTAL TOP BACK OF CURB HP HIGH POINT TBR TO BE REMOVED INVERT TOP OF CURB LINEAR FEET TFI TOP FRONT OF INLET **LOW POINT** TOP OF WALL LEFT TOP TOP OF PIPE MANHOLE TYPICAL ON CENTER UTILITY EASEMENT OHE OVERHEAD ELECTRIC **VERT** VERTICAL OFFSET WATER SERVICE POINT OF CURVATURE WSFI WATER SURFACE ELEVATION

	LEGEND	
EXISTING	PROPOSED	DESCRIPTION
		SECTION LINE W/ SECTION CORNER
Ť		PROPERTY BOUNDARY
		RIGHT OF WAY LINE
		PROPERTY LOT LINE
		FLOWLINE
		CENTER LINE
		EASEMENT LINE
		SIDEWALK
		CATCH CURB AND GUTTER
		SPILL CURB & GUTTER
— — 5820 — —	5820	5' CONTOUR
_ _ 5821 _ _	5821	1' CONTOUR
 5		STORM LINE W/ MANHOLE
		STORM INLET
		UTILITY CROSSING
—— ss ——— ss ——	──	SANITARY SEWER W/ MANHOLE
wm		WATERLINE & VALVE W/ FIRE HYDRANT ASSEMBLY
-	-	WATER SERVICE W/ METER
		SANITARY SERVICE
G	G	GAS LINE
— т —	T	TELEPHONE LINE
——Е—	——Е—	ELECTRIC LINE
	CATV	CABLE TV LINE
——— OH ———	—— ОН ——	OVERHEAD LINE
——— FO ———	——— FO ———	FIBER OPTIC LINE
 1	——ı ——	IRRIGATION LINE
U	U	UNDERDRAIN LINE
\(\phi	*	STREET LIGHT
	→ · · · · —	
d	•	ROAD SIGN
		CONCRETE CROSSPAN
	•XX.XX	SPOT ELEVATION (AT FLOWLINE UNLESS OTHERWISE INDICATED)

SLOPE AND DIRECTION FLOW DIRECTION CUT/ FILL LINE FLOODPLAIN WATER SURFACE ELEVATION HYDRAULIC GRADE LINE (HGL) RIP-RAP (SOIL RIP-RAP UNLESS

MEDIAN CONCRETE PER CITY OF THORNTON DETAILS 800-3 & 800-4

OTHERWISE INDICATED)

100-YR PONDING DEPTH (SUMP INLETS)

CAUTION: IF THIS SHEET IS NOT 22"x34" IT IS A REDUCED PRINT **LEGEND** PROPOSED SECTION BOUNDARY SPILL CURB / SIDEWALK **CURB RAMPS** SIGN BOLLARD STREET LIGHT | | | | | | FUTURE PHASE UTILITIES (BY OTHERS) INFRASTRUCTURE PHASE PHASE LINE FUTURE PHASE (BY OTHERS) /FUTURE PHASE SANITARY (BY OTHERS) INFRASTRUCTURE PHASE SANITARY SCALE: 1" = 100' CONTRACTOR TO FIELD VERIFY LOCATION OF ALL EXISTING UTILITES PRIOR TO CONSTRUCTION WORK SHALL BE CONSTRUCTED TO CITY OF THORNTON STANDARDS AND SPECIFICATIONS. THIS APPROVAL IS FOR CONFORMANCE WITH THESE STANDARDS AND SPECIFICATIONS AND OTHER CITY REQUIREMENTS. THE DESIGN AND CONCEPT REMAINS THE RESPONSIBILITY OF THE PROFESSIONAL ENGINEER OR LANDSCAPE PROFESSIONAL.



JOB NO.: DCS22-4022 J. MANN DRAWN BY: I. CRAWFORD 6/13/2023

CAUTION: IF THIS SHEET IS NOT 22"x34" IT IS A REDUCED PRINT PROJECT BENCHMARK NOTE: COORDINATES ARE MODIFIED GROUND BASED FROM COLORADO ADAMS COUNTY BENCHMARK NAMED 95.0123 BEING A 3.25" ALUMINUM STATE PLANE NORTH SYSTEM CAP, LOCATED EAST OF INTERSECTION OF COLORADO BOULEVARD AND EAST 152ND AVENUE. ELEVATION=5235.84 (NAVD 88 DATUM). BASIS OF BEARINGS BEARINGS ARE BASED ON THE SOUTH LINE OF THE SOUTHEAST QUARTER OF SECTION 20, WITH AN ASSUMED BEARING OF NORTH 89°07'24" EAST. WARE - FIBER OPTIC VAULT TO BE RELOCATED (RE: C7.0 FOR PROPOSED LOCATION) **KEY MAP** N: 1,222,700.69 — E: 3,166,075.78 _ EXISTING N: 1,222,706.30 — E: 3,166,443.74 LIGHTPOLE AND /- EXISTING N: 1,222,692.63 -**ELECTRICAL BOX** WALK TO BE N: 1,222,655.14 — E: 3,166,075.92 TO BE REMOVED **REMOVE CURB-**REMOVED E: 3,166,024.72 RAMP N: 1,222,687.67 -∕− N: 1,222,698.31 E: 3,166,427.33 E: 3,166,443.30 N: 1,222,656.45 — E: 3,166,012.91 N: 1,222,682.41 — E: 3,166,055.22 -- RESET AIR VENTS
√ N: 1,222,679.97 -E: 3,166,055.25 EXISTING FIRE HYDRANT - EXISTING CURB AND — EXISTING N: 1,222,655.18 -PROTECT IN PLACE **GUTTER TO BE** STRIPING TO E: 3,165,879.75 REMOVED BE REMOVED - REMOVE ASPHALT E 136TH AVE FOR WATER LINE (R.O.W. VARIES) CONNECTION E 136TH AVE − N: 1,222,641.77 FOR AND ON BEHALF (R.O.W. VARIES) E: 3,165,779.85 OF WARE MALCOMB E FO E FO E FO E FO E WM LIBRAR N: 1,222,646.17 -E: 3,166,067.52 **LEGEND EXISTING PROPOSED** BOUNDARY EASEMENT CENTERLINE SECTION **BOUNDARY** SPILL CURB GUTTER CATCH CURB BUILDING SIDEWALK - N: 1,222,706.49 E: 3,164,748.60 **CURB RAMPS** acksquare REMOVE ASPHALT FOR SANITARY SEWER LINE **FENCE** ____x___ SIGN EXISTING RAMP \(\frac{1}{2} \) TO BE REPLACED BOLLARD A PAVEMENT MARKINGS A ST & √ N: 1,222,682.83 — - EXISTING CURB E: 3,164,767.11 AND GUTTER TO BE REPLACED EXISTING WALK -TO BE REPLACED − N: 1,222,703.91 E: 3,164,768.73 ICC/A117.1 ACCESSIBLE ROUTE ======= SAWCUT OVERHEAD UTILITY ——— OH — - N: 1,222,695.42 UTILITY POLE E: 3,164,790.64 N: 1,222,687.58 **▼** E: 3,164,791.19 DOWN GUY STREET LIGHT | | | | | | | | | FIRE HYDRANT JOB NO.: PA / PM: J. MANN DRAWN BY: CONTRACTOR TO FIELD VERIFY LOCATION OF ALL EXISTING UTILITES 6/13/2023 PRIOR TO CONSTRUCTION WORK SHALL BE CONSTRUCTED TO CITY OF THORNTON STANDARDS AND SPECIFICATIONS. THIS APPROVAL IS FOR CONFORMANCE WITH THESE STANDARDS AND SPECIFICATIONS AND OTHER CITY REQUIREMENTS. THE DESIGN AND CONCEPT REMAINS THE RESPONSIBILITY OF THE PROFESSIONAL ENGINEER OR LANDSCAPE PROFESSIONAL.

DCS22-4022 I. CRAWFORD

FOR AND ON BEHALF OF WARE MALCOMB

LIBRAR

DCS22-4022 J. MANN DRAWN BY: I. CRAWFORD 6/13/2023

SCALE: 1" = 100'

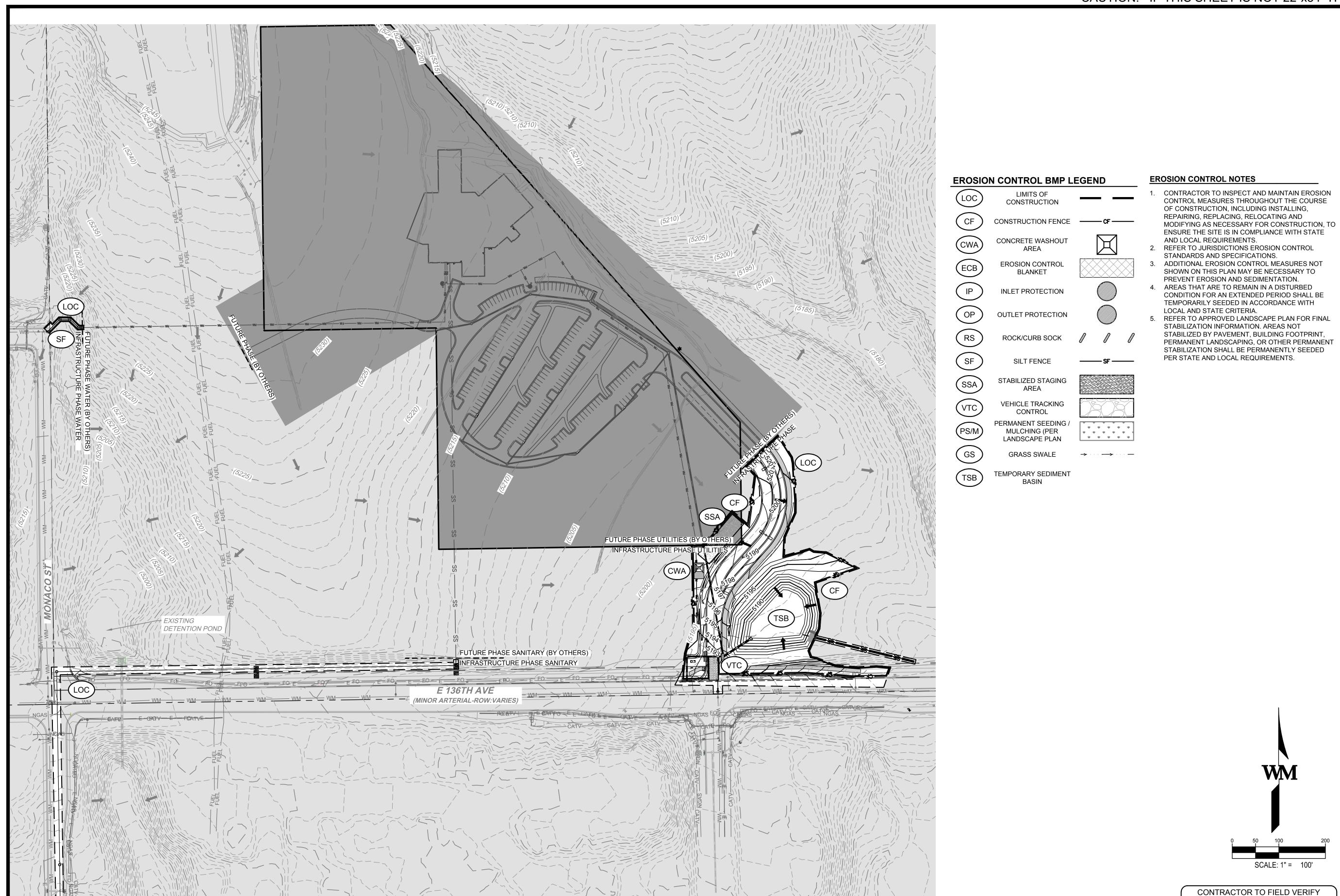
LOCATION OF ALL EXISTING UTILITES

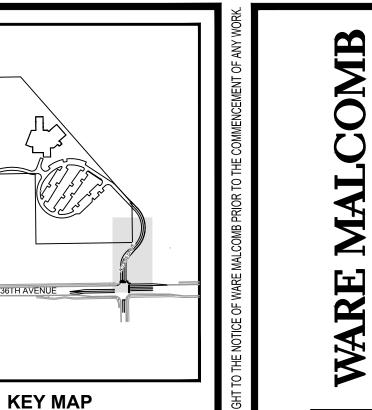
PRIOR TO CONSTRUCTION

WORK SHALL BE CONSTRUCTED TO CITY OF THORNTON STANDARDS

REQUIREMENTS. THE DESIGN AND CONCEPT REMAINS THE

PROFESSIONAL.





FOR AND ON BEHALF OF WARE MALCOMB

REVIEW BY CDPHE OR CITY STAFF. INSPECTION REPORTS MUST IDENTIFY ANY INCIDENTS OF

NON-COMPLIANCE WITH THE TERMS AND CONDITIONS OF THE PERMIT.

OBSERVATION OF THE FAILING CONTROL MEASURE SILT FENCE PATCHING: PATCHING IS ONLY ALLOWED ON THE TOP HALF OF THE FENCE. NOT MORE THAN

TWO (2) PATCHES PER SECTION OF FENCE. SILT FENCE WITH HOLES OR DETERIORATION ON THE LOWER HALF OF THE FENCE MUST BE REPLACED. REPAIR TYPICALLY INVOLVES REPLACING THE SILT FENCE TO MAINTAIN THE CMS EFFECTIVENESS TO DRAIN SLOWLY AND FUNCTION AS ORIGINALLY DESIGNED.

FOR ALL INSTANCES OF NONCOMPLIANCE BASED ON ENVIRONMENTAL HAZARDS AND CHEMICAL SPILLS AND RELEASES, ALL NEEDED INFORMATION MUST BE PROVIDED ORALLY TO CDPHE SPILL REPORTING LINE (24-HOUR NUMBER FOR ENVIRONMENTAL HAZARDS AND CHEMICAL SPILLS AND RELEASES: 1-877-518-5608) WITHIN 24-HOURS FROM THE TIME THE OWNER/CONTRACTOR BECOMES AWARE OF THE CIRCUMSTANCES.

BE USED FOR REINFORCEMENT BEHIND ANOTHER BMP SUCH AS SILT FENCE) 15. CONTROL MEASURES REFERRED TO AS "CUTBACK CURB" ARE NOT ALLOWED. THE CUTBACK CURB MAY

BECOME INEFFECTIVE AND MAY ALSO COMPROMISE THE INTEGRITY OF THE CURB AND IN MOST CASES DOES NOT PROVIDE ANY WATER QUALITY BENEFIT FOR FILTERING OUT SEDIMENT 16. INLET PROTECTION AND VEGETATIVE BUFFER CONTROL MEASURES SHALL NOT BE USED AS STANDALONE

17. CONTROL MEASURES INTENDED FOR SHEET FLOW SEDIMENT RUNOFF SHALL BE PLACED PARALLEL TO TH

AS ANY EGRESS FROM EXPOSED DIRT TO PAVED AREAS TO PREVENT TRACK-OUT ONTO STREETS. IF TRACK-OUT DOES OCCUR. THE OWNER/CONTRACTOR SHALL IMMEDIATELY SWEEP THE STREET OF DEBRIS.

DUST. CONTROL MEASURES MAY INCLUDE MINIMIZING DISTURBED AREAS, WATERING, AND/OR PROVIDING TEMPORARY STABILIZATION

AREA SHALL BE COMPLETED WITHIN 14 CALENDAR DAYS AFTER FINAL GRADING OR THE FINAL EARTH DISTURBANCE HAS BEEN COMPLETED. WHEN IT IS NOT POSSIBLE TO PERMANENTLY STABILIZE A DISTURBED AREA AFTER AN EARTH DISTURBANCE HAS BEEN COMPLETED OR WHERE SIGNIFICANT EARTH DISTURBANCE ACTIVITY CEASES, TEMPORARY SOIL EROSION CONTROL MEASURES SHALL BE IMPLEMENTED WITHIN 14 CALENDAR DAYS. TEMPORARY EROSION CONTROL MEASURES SHALL BE MAINTAINED UNTIL PERMANENT SOIL EROSION MEASURES ARE IMPLEMENTED.

BEEN COMPLETED, AND UNIFORM VEGETATIVE COVER HAS BEEN ESTABLISHED WITH AN INDIVIDUAL PLANT DENSITY OF AT LEAST 70 PERCENT OF PRE-DISTURBANCE LEVELS, OR EQUIVALENT PERMANENT, PHYSICAL EROSION REDUCTION METHODS HAVE BEEN EMPLOYED.

ALL SITE WASTES (INCLUDING TRASH AND BUILDING MATERIALS) MUST BE PROPERLY MANAGED TO PREVENT POTENTIAL POLLUTION DISCHARGES TO THE MS4 OR STATE WATERS.

STREET REPAIR OPERATIONS SUCH AS ROTOR MILLING, SLURRY SEAL AND CHIP SEAL. THE MINIMUM CMS

AND SPECIFICATIONS. THIS APPROVAL IS FOR CONFORMANCE WITH THESE STANDARDS AND SPECIFICATIONS AND OTHER CITY REQUIREMENTS. THE DESIGN AND CONCEPT REMAINS THE RESPONSIBILITY OF THE PROFESSIONAL ENGINEER OR LANDSCAPE PROFESSIONAL.

CONTROL MEASURES SHALL BE INSTALLED BEFORE ANY EARTH DISTURBING ACTIVITIES COMMENCE. THE OWNER/CONTRACTOR SHALL NOTIFY THE THORNTON INSPECTOR ONCE ALL INITIAL CONTROL

EROSION CONTROL BMP LEGEND

CONSTRUCTION

CONSTRUCTION FENCE

CONCRETE WASHOUT

INLET PROTECTION

ROCK/CURB SOCK

SILT FENCE

STABILIZED STAGING

AREA

VEHICLE TRACKING

CONTROL

1. CONTRACTOR TO INSPECT AND MAINTAIN EROSION

OF CONSTRUCTION. INCLUDING INSTALLING.

REFER TO JURISDICTIONS EROSION CONTROL

ADDITIONAL EROSION CONTROL MEASURES NOT

CONDITION FOR AN EXTENDED PERIOD SHALL BE

REFER TO APPROVED LANDSCAPE PLAN FOR FINAL

STABILIZED BY PAVEMENT, BUILDING FOOTPRINT

PERMANENT LANDSCAPING, OR OTHER PERMANENT

STABILIZATION SHALL BE PERMANENTLY SEEDED

TEMPORARILY SEEDED IN ACCORDANCE WITH

SHOWN ON THIS PLAN MAY BE NECESSARY TO

PREVENT EROSION AND SEDIMENTATION.

4. AREAS THAT ARE TO REMAIN IN A DISTURBED

STABILIZATION INFORMATION. AREAS NOT

PER STATE AND LOCAL REQUIREMENTS.

REPAIRING, REPLACING, RELOCATING AND

CONTROL MEASURES THROUGHOUT THE COURSE

MODIFYING AS NECESSARY FOR CONSTRUCTION, TO ENSURE THE SITE IS IN COMPLIANCE WITH STATE

EROSION CONTROL NOTES

AND LOCAL REQUIREMENTS.

LOCAL AND STATE CRITERIA

STANDARDS AND SPECIFICATIONS.

LOC

(CWA

(SSA)

(VTC)

LOC

(CF

LEGEND

EXISTING

— *—(5278)*— *–*

BOUNDARY

EASEMENT

— −(5280)— — MAJOR CONTOUR — 5280 —

MINOR CONTOUR

CURB / GUTTER

SIDEWALK

OVERHEAD UTILITY

UTILITY POLE DOWN GUY LIGHT POLE

STORM DRAIN

ICC/A117.1 ACCESSIBLE ROUTE -----

CITY OF THORNTON NOTES

PROPOSED

- MEASURES HAVE BEEN INSTALLED FOR AN INITIAL INSPECTION AT LEAST FORTY EIGHT (48) HOURS PRIOR TO THE INSPECTION. CONSTRUCTION ACTIVITY CANNOT BEGIN UNTIL A PASSING INITIAL INSPECTION HAS STORMWATER DISCHARGES FROM CONSTRUCTION ACTIVITIES SHALL NOT CAUSE, HAVE THE REASONABLE
- POTENTIAL TO CAUSE, OR MEASURABLY CONTRIBUTE TO EXCEED ANY WATER QUALITY STANDARD.
- CONSTRUCTION SHALL BE PHASED IN A MANNER TO LIMIT EARTH DISTURBING ACTIVITIES (I.E. THE ENTIRE PROJECT SITE SHOULD NOT BE DISTURBED IF CONSTRUCTION WILL ONLY BE OCCURRING IN ONE PARTICULAR SECTION)
- SEDIMENT CAUSED BY ACCELERATED SOIL EROSION SHALL BE REMOVED FROM RUNOFF WATER BEFORE IT LEAVES THE CONSTRUCTION SITE.
- BULK STORAGE STRUCTURES FOR PETROLEUM PRODUCTS AND ANY OTHER CHEMICALS SHALL HAVE SECONDARY CONTAINMENT OR EQUIVALENT PROTECTION TO CONTAIN ALL SPILLS AND PREVENT ANY SPILLED MATERIAL FROM ENTERING THE MS4 OR STATE WATERS
- A COPY OF THE SWMP AND EROSION AND SEDIMENT CONTROL (ESC) PLANS MUST BE AVAILABLE AT ALL TIMES ON THE CONSTRUCTION SITE UNLESS OTHERWISE APPROVED BY CDPHE OR THORNTON.
- THE SWMP AND EC PLAN SHALL BE CONTINUOUSLY UPDATED TO REFLECT NEW OR REVISED CONTROL MEASURES (CM) DUE TO CHANGES IN DESIGN, CONSTRUCTION, OPERATION, OR MAINTENANCE OF THE CONSTRUCTION SITE. UPDATES MUST BE MADE WITHIN 72-HOURS FOLLOWING THE CHANGE IN CONTROL
- THE OWNER/CONTRACTOR SHALL INSPECT THE CONSTRUCTION SITE (INCLUDING ALL CONTROL MEASURES, STORAGE CONTAINERS, AND CONSTRUCTION EQUIPMENT) AT A MINIMUM OF EVERY 7 CALENDAR DAYS OR EVERY 14 CALENDAR DAYS. IF ON THE 14 DAY FREQUENCY A 24-HOUR POST STORM INSPECTION MUST BE CONDUCTED AFTER A PRECIPITATION EVENT OR SNOW MELT. INSPECTIONS SHALL CONTINUE UNTIL AN INACTIVATION NOTICE IS FILED WITH CDPHE.
- THE OWNER/CONTRACTOR SHALL KEEP A RECORD OF ALL INSPECTIONS ON SITE AND AVAILABLE FOR
- CONTROL MEASURES REQUIRING MAINTENANCE OR ADJUSTMENT SHALL BE REPAIRED IMMEDIATELY AFTER

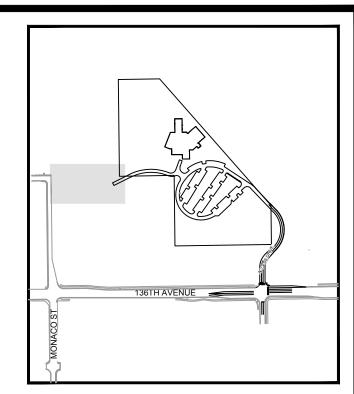
- STRAW BALES SHALL NOT BE USED FOR PRIMARY EROSION OR SEDIMENT CONTROL (I.E. STRAW BALES MA'
- CMS. THESE METHODS MUST BE UTILIZED WITH AT LEAST ONE ADDITIONAL CM.
- 18. ALL CONTROL MEASURES SHALL BE CLEANED WHEN SEDIMENT LEVELS ACCUMULATE TO HALF THE DESIGN
- OF THE CM UNLESS OTHERWISE SPECIFIED. 19. A VEHICLE TRACKING CONTROL (VTC) SHALL BE PLACED AT ALL ENTRANCES/EXITS FROM THE SITE AS WELI
- RECYCLED CRUSHED CONCRETE OR ASPHALT SHALL NOT BE USED FOR VEHICLE TRACKING PADS. 20. FOR RESIDENTIAL PROJECTS, BACK OF CURB PROTECTION IS REQUIRED ALONG ALL INTERIOR LOTS
- 21. ALL SEDIMENT COLLECTED IN CONTROL MEASURES SHALL BE REMOVED UPON INITIAL ACCEPTANCE. 22. WIND EROSION AND DUST CONTROL MEASURES MUST BE UTILIZED TO MINIMIZE AIRBORNE PARTICULATE
- 23. PERMANENT EROSION CONTROL MEASURES FOR SLOPES, CHANNELS, DITCHES, OR ANY DISTURBED LAND
 - FINAL STABILIZATION HAS BEEN ACHIEVED WHEN ALL EARTH DISTURBING ACTIVITIES AT THE SITE HAVE
- ALL TEMPORARY CONTROL MEASURES SHALL BE REMOVED FROM THE SITE UPON SUBMITTING THE INACTIVATION NOTICE.
- REQUIRED ARE; INLET PROTECTION, CURB SOCKS AND STREET SWEEPING.

CONTRACTOR TO FIELD VERIFY LOCATION OF ALL EXISTING UTILITES PRIOR TO CONSTRUCTION

WORK SHALL BE CONSTRUCTED TO CITY OF THORNTON STANDARDS

THINK

JOB NO.: DCS22-4022 PA / PM: J. MANN DRAWN BY: I. CRAWFORD 6/13/2023



EROSION CONTROL BMP LEGEND

CONSTRUCTION

CONSTRUCTION FENCE

CONCRETE WASHOUT (CWA)

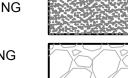
INLET PROTECTION

VEHICLE TRACKING CONTROL







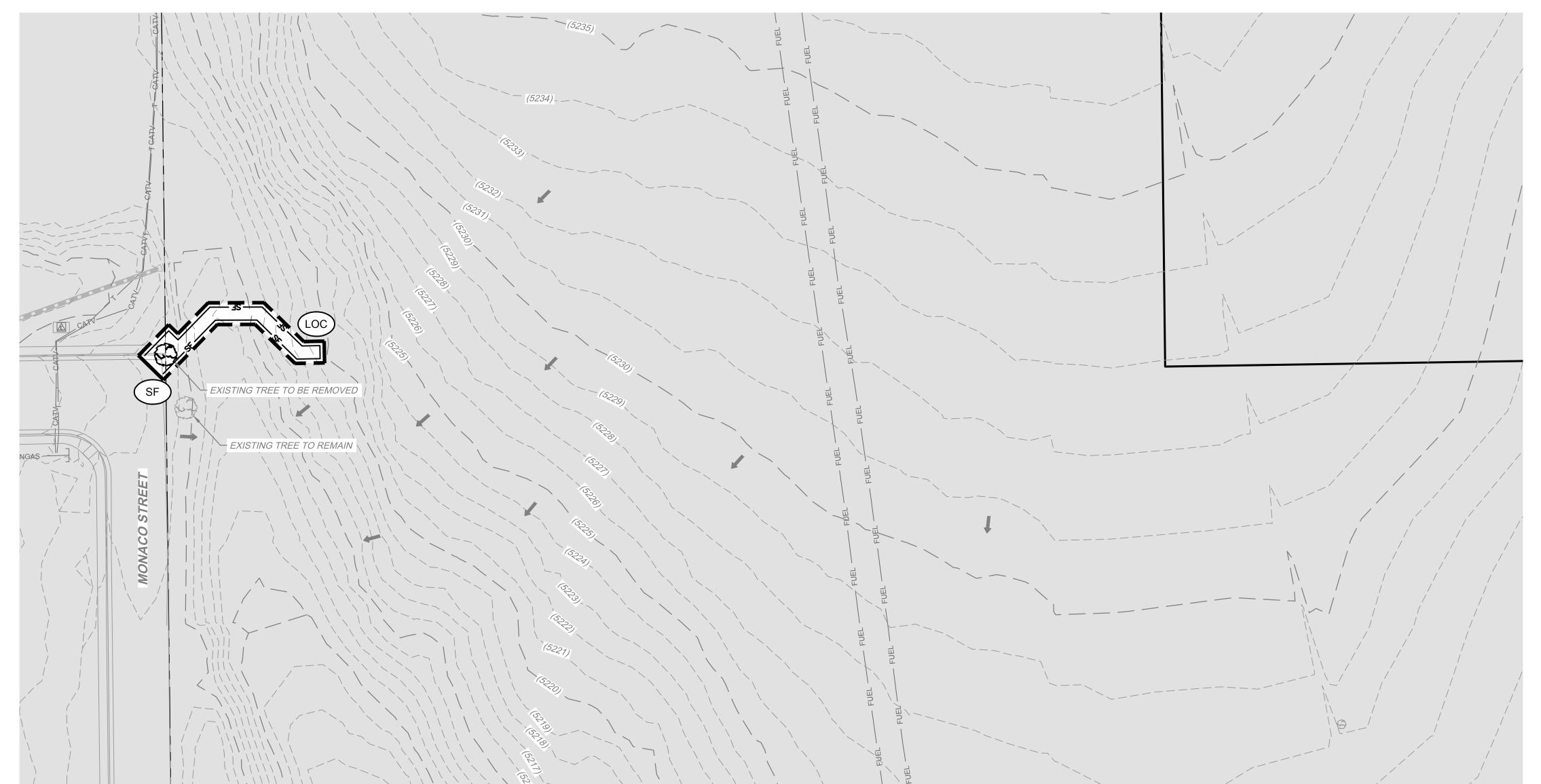


FOR AND ON BEHALF OF WARE MALCOMB

JOB NO.: DCS22-4022 PA / PM: J. MANN DRAWN BY: I. CRAWFORD

6/13/2023

CONTRACTOR TO FIELD VERIFY LOCATION OF ALL EXISTING UTILITES PRIOR TO CONSTRUCTION PROFESSIONAL.



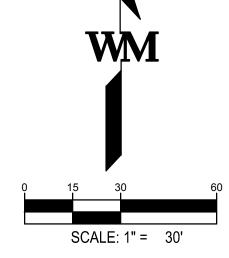
CITY OF THORNTON NOTES

- CONTROL MEASURES SHALL BE INSTALLED BEFORE ANY EARTH DISTURBING ACTIVITIES COMMENCE.
- THE OWNER/CONTRACTOR SHALL NOTIFY THE THORNTON INSPECTOR ONCE ALL INITIAL CONTROL MEASURES HAVE BEEN INSTALLED FOR AN INITIAL INSPECTION AT LEAST FORTY EIGHT (48) HOURS PRIOR TO
- THE INSPECTION. CONSTRUCTION ACTIVITY CANNOT BEGIN UNTIL A PASSING INITIAL INSPECTION HAS OCCURRED. STORMWATER DISCHARGES FROM CONSTRUCTION ACTIVITIES SHALL NOT CAUSE, HAVE THE REASONABLE POTENTIAL TO CAUSE, OR MEASURABLY CONTRIBUTE TO EXCEED ANY WATER QUALITY STANDARD. CONSTRUCTION SHALL BE PHASED IN A MANNER TO LIMIT EARTH DISTURBING ACTIVITIES (I.E. THE ENTIRE PROJECT SITE SHOULD NOT BE DISTURBED IF CONSTRUCTION WILL ONLY BE OCCURRING IN ONE
- PARTICULAR SECTION). SEDIMENT CAUSED BY ACCELERATED SOIL EROSION SHALL BE REMOVED FROM RUNOFF WATER BEFORE IT LEAVES THE CONSTRUCTION SITE.
- BULK STORAGE STRUCTURES FOR PETROLEUM PRODUCTS AND ANY OTHER CHEMICALS SHALL HAVE SECONDARY CONTAINMENT OR EQUIVALENT PROTECTION TO CONTAIN ALL SPILLS AND PREVENT ANY SPILLED MATERIAL FROM ENTERING THE MS4 OR STATE WATERS.
- A COPY OF THE SWMP AND EROSION AND SEDIMENT CONTROL (ESC) PLANS MUST BE AVAILABLE AT ALL TIMES ON THE CONSTRUCTION SITE UNLESS OTHERWISE APPROVED BY CDPHE OR THORNTON.
- THE SWMP AND EC PLAN SHALL BE CONTINUOUSLY UPDATED TO REFLECT NEW OR REVISED CONTROL MEASURES (CM) DUE TO CHANGES IN DESIGN, CONSTRUCTION, OPERATION, OR MAINTENANCE OF THE CONSTRUCTION SITE. UPDATES MUST BE MADE WITHIN 72-HOURS FOLLOWING THE CHANGE IN CONTROL MEASURES.
- THE OWNER/CONTRACTOR SHALL INSPECT THE CONSTRUCTION SITE (INCLUDING ALL CONTROL MEASURES, STORAGE CONTAINERS, AND CONSTRUCTION EQUIPMENT) AT A MINIMUM OF EVERY 7 CALENDAR DAYS OR EVERY 14 CALENDAR DAYS. IF ON THE 14 DAY FREQUENCY A 24-HOUR POST STORM INSPECTION MUST BE CONDUCTED AFTER A PRECIPITATION EVENT OR SNOW MELT. INSPECTIONS SHALL CONTINUE UNTIL AN INACTIVATION NOTICE IS FILED WITH CDPHE.
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- NON-COMPLIANCE WITH THE TERMS AND CONDITIONS OF THE PERMIT.
- CONTROL MEASURES REQUIRING MAINTENANCE OR ADJUSTMENT SHALL BE REPAIRED IMMEDIATELY AFTER OBSERVATION OF THE FAILING CONTROL MEASURE.
- SILT FENCE PATCHING: PATCHING IS ONLY ALLOWED ON THE TOP HALF OF THE FENCE. NOT MORE THAN TWO (2) PATCHES PER SECTION OF FENCE. SILT FENCE WITH HOLES OR DETERIORATION ON THE LOWER
- HALF OF THE FENCE MUST BE REPLACED. REPAIR TYPICALLY INVOLVES REPLACING THE SILT FENCE TO MAINTAIN THE CMS EFFECTIVENESS TO DRAIN SLOWLY AND FUNCTION AS ORIGINALLY DESIGNED. FOR ALL INSTANCES OF NONCOMPLIANCE BASED ON ENVIRONMENTAL HAZARDS AND CHEMICAL SPILLS AND RELEASES, ALL NEEDED INFORMATION MUST BE PROVIDED ORALLY TO CDPHE SPILL REPORTING LINE (24-HOUR NUMBER FOR ENVIRONMENTAL HAZARDS AND CHEMICAL SPILLS AND RELEASES: 1-877-518-5608) WITHIN 24-HOURS FROM THE TIME THE OWNER/CONTRACTOR BECOMES AWARE OF THE
- CONTROL MEASURES REFERRED TO AS "CUTBACK CURB" ARE NOT ALLOWED. THE CUTBACK CURB MAY BECOME INEFFECTIVE AND MAY ALSO COMPROMISE THE INTEGRITY OF THE CURB AND IN MOST CASES

14. STRAW BALES SHALL NOT BE USED FOR PRIMARY EROSION OR SEDIMENT CONTROL (I.E. STRAW BALES MAY BE USED FOR REINFORCEMENT BEHIND ANOTHER BMP SUCH AS SILT FENCE).

- DOES NOT PROVIDE ANY WATER QUALITY BENEFIT FOR FILTERING OUT SEDIMENT. INLET PROTECTION AND VEGETATIVE BUFFER CONTROL MEASURES SHALL NOT BE USED AS STANDALONE CMS. THESE METHODS MUST BE UTILIZED WITH AT LEAST ONE ADDITIONAL CM.
- CONTROL MEASURES INTENDED FOR SHEET FLOW SEDIMENT RUNOFF SHALL BE PLACED PARALLEL TO THE SLOPE.
- ALL CONTROL MEASURES SHALL BE CLEANED WHEN SEDIMENT LEVELS ACCUMULATE TO HALF THE DESIGN OF THE CM UNLESS OTHERWISE SPECIFIED.
- 19. A VEHICLE TRACKING CONTROL (VTC) SHALL BE PLACED AT ALL ENTRANCES/EXITS FROM THE SITE AS WELL AS ANY EGRESS FROM EXPOSED DIRT TO PAVED AREAS TO PREVENT TRACK-OUT ONTO STREETS. IF
- TRACK-OUT DOES OCCUR, THE OWNER/CONTRACTOR SHALL IMMEDIATELY SWEEP THE STREET OF DEBRIS. RECYCLED CRUSHED CONCRETE OR ASPHALT SHALL NOT BE USED FOR VEHICLE TRACKING PADS.
- 20. FOR RESIDENTIAL PROJECTS, BACK OF CURB PROTECTION IS REQUIRED ALONG ALL INTERIOR LOTS. 21. ALL SEDIMENT COLLECTED IN CONTROL MEASURES SHALL BE REMOVED UPON INITIAL ACCEPTANCE.
- 22. WIND EROSION AND DUST CONTROL MEASURES MUST BE UTILIZED TO MINIMIZE AIRBORNE PARTICULATE DUST. CONTROL MEASURES MAY INCLUDE MINIMIZING DISTURBED AREAS, WATERING, AND/OR
- PROVIDING TEMPORARY STABILIZATION 23. PERMANENT EROSION CONTROL MEASURES FOR SLOPES, CHANNELS, DITCHES, OR ANY DISTURBED LAND AREA SHALL BE COMPLETED WITHIN 14 CALENDAR DAYS AFTER FINAL GRADING OR THE FINAL EARTH DISTURBANCE HAS BEEN COMPLETED. WHEN IT IS NOT POSSIBLE TO PERMANENTLY STABILIZE A DISTURBED AREA AFTER AN EARTH DISTURBANCE HAS BEEN COMPLETED OR WHERE SIGNIFICANT EARTH DISTURBANCE ACTIVITY CEASES, TEMPORARY SOIL EROSION CONTROL MEASURES SHALL BE IMPLEMENTED WITHIN 14 CALENDAR DAYS. TEMPORARY EROSION CONTROL MEASURES SHALL BE MAINTAINED UNTIL PERMANENT SOIL EROSION MEASURES ARE IMPLEMENTED.
- 24. FINAL STABILIZATION HAS BEEN ACHIEVED WHEN ALL EARTH DISTURBING ACTIVITIES AT THE SITE HAVE BEEN COMPLETED, AND UNIFORM VEGETATIVE COVER HAS BEEN ESTABLISHED WITH AN INDIVIDUAL PLANT DENSITY OF AT LEAST 70 PERCENT OF PRE-DISTURBANCE LEVELS, OR EQUIVALENT PERMANENT, PHYSICAL EROSION REDUCTION METHODS HAVE BEEN EMPLOYED.
- 25. ALL TEMPORARY CONTROL MEASURES SHALL BE REMOVED FROM THE SITE UPON SUBMITTING THE INACTIVATION NOTICE.
- 26. ALL SITE WASTES (INCLUDING TRASH AND BUILDING MATERIALS) MUST BE PROPERLY MANAGED TO PREVENT POTENTIAL POLLUTION DISCHARGES TO THE MS4 OR STATE WATERS.
- 27. STREET REPAIR OPERATIONS SUCH AS ROTOR MILLING, SLURRY SEAL AND CHIP SEAL. THE MINIMUM CMS REQUIRED ARE; INLET PROTECTION, CURB SOCKS AND STREET SWEEPING.

- **EROSION CONTROL NOTES** 1. CONTRACTOR TO INSPECT AND MAINTAIN EROSION CONTROL MEASURES THROUGHOUT THE COURSE OF CONSTRUCTION, INCLUDING INSTALLING, REPAIRING, REPLACING, RELOCATING AND MODIFYING AS NECESSARY FOR CONSTRUCTION, TO ENSURE THE SITE IS IN COMPLIANCE WITH STATE
- AND LOCAL REQUIREMENTS. 2. REFER TO JURISDICTIONS EROSION CONTROL
- STANDARDS AND SPECIFICATIONS. 3. ADDITIONAL EROSION CONTROL MEASURES NOT
- SHOWN ON THIS PLAN MAY BE NECESSARY TO PREVENT EROSION AND SEDIMENTATION. 4. AREAS THAT ARE TO REMAIN IN A DISTURBED
- CONDITION FOR AN EXTENDED PERIOD SHALL BE TEMPORARILY SEEDED IN ACCORDANCE WITH LOCAL AND STATE CRITERIA.
- REFER TO APPROVED LANDSCAPE PLAN FOR FINAL STABILIZATION INFORMATION. AREAS NOT STABILIZED BY PAVEMENT, BUILDING FOOTPRINT. PERMANENT LANDSCAPING, OR OTHER PERMANENT STABILIZATION SHALL BE PERMANENTLY SEEDED PER STATE AND LOCAL REQUIREMENTS.



WORK SHALL BE CONSTRUCTED TO CITY OF THORNTON STANDARDS AND SPECIFICATIONS. THIS APPROVAL IS FOR CONFORMANCE WITH THESE STANDARDS AND SPECIFICATIONS AND OTHER CITY REQUIREMENTS. THE DESIGN AND CONCEPT REMAINS THE RESPONSIBILITY OF THE PROFESSIONAL ENGINEER OR LANDSCAPE

SILT FENCE

CONTROL

FOR AND ON BEHALF

OF WARE MALCOMB

JOB NO.: DCS22-4022 PA / PM: J. MANN DRAWN BY: I. CRAWFORD 6/13/2023

LOC **EROSION CONTROL BMP LEGEND** (LOC) CONSTRUCTION - NGAS ---CONSTRUCTION FENCE —— CF —— **CONCRETE WASHOUT** (CWA) **CITY OF THORNTON NOTES** ΙP **INLET PROTECTION** CONTROL MEASURES SHALL BE INSTALLED BEFORE ANY EARTH DISTURBING ACTIVITIES COMMENCE THE OWNER/CONTRACTOR SHALL NOTIFY THE THORNTON INSPECTOR ONCE ALL INITIAL CONTROL MEASURES HAVE BEEN INSTALLED FOR AN INITIAL INSPECTION AT LEAST FORTY EIGHT (48) HOURS PRIOR TO THE INSPECTION. CONSTRUCTION ACTIVITY CANNOT BEGIN UNTIL A PASSING INITIAL INSPECTION HAS ROCK/CURB SOCK STORMWATER DISCHARGES FROM CONSTRUCTION ACTIVITIES SHALL NOT CAUSE, HAVE THE REASONABLE SF POTENTIAL TO CAUSE, OR MEASURABLY CONTRIBUTE TO EXCEED ANY WATER QUALITY STANDARD. CONSTRUCTION SHALL BE PHASED IN A MANNER TO LIMIT EARTH DISTURBING ACTIVITIES (I.E. THE ENTIRE PROJECT SITE SHOULD NOT BE DISTURBED IF CONSTRUCTION WILL ONLY BE OCCURRING IN ONE (SSA) STABILIZED STAGING SEDIMENT CAUSED BY ACCELERATED SOIL EROSION SHALL BE REMOVED FROM RUNOFF WATER BEFORE IT VEHICLE TRACKING (VTC) BULK STORAGE STRUCTURES FOR PETROLEUM PRODUCTS AND ANY OTHER CHEMICALS SHALL HAVE SECONDARY CONTAINMENT OR EQUIVALENT PROTECTION TO CONTAIN ALL SPILLS AND PREVENT ANY SPILLED MATERIAL FROM ENTERING THE MS4 OR STATE WATERS. A COPY OF THE SWMP AND EROSION AND SEDIMENT CONTROL (ESC) PLANS MUST BE AVAILABLE AT ALL TIMES ON THE CONSTRUCTION SITE UNLESS OTHERWISE APPROVED BY CDPHE OR THORNTON THE SWMP AND EC PLAN SHALL BE CONTINUOUSLY UPDATED TO REFLECT NEW OR REVISED CONTROL MEASURES (CM) DUE TO CHANGES IN DESIGN, CONSTRUCTION, OPERATION, OR MAINTENANCE OF THE MEASURES. EVERY 14 CALENDAR DAYS. IF ON THE 14 DAY FREQUENCY A 24-HOUR POST STORM INSPECTION MUST BE CONDUCTED AFTER A PRECIPITATION EVENT OR SNOW MELT. INSPECTIONS SHALL CONTINUE UNTIL AN INACTIVATION NOTICE IS FILED WITH CDPHE THE OWNER/CONTRACTOR SHALL KEEP A RECORD OF ALL INSPECTIONS ON SITE AND AVAILABLE FOR REVIEW BY CDPHE OR CITY STAFF. INSPECTION REPORTS MUST IDENTIFY ANY INCIDENTS OF NON-COMPLIANCE WITH THE TERMS AND CONDITIONS OF THE PERMIT. CONTROL MEASURES REQUIRING MAINTENANCE OR ADJUSTMENT SHALL BE REPAIRED IMMEDIATELY AFTER OBSERVATION OF THE FAILING CONTROL MEASURE. - (SD) 12. SILT FENCE PATCHING: PATCHING IS ONLY ALLOWED ON THE TOP HALF OF THE FENCE. NOT MORE THAN TWO (2) PATCHES PER SECTION OF FENCE. SILT FENCE WITH HOLES OR DETERIORATION ON THE LOWER HALF OF THE FENCE MUST BE REPLACED. REPAIR TYPICALLY INVOLVES REPLACING THE SILT FENCE TO MAINTAIN THE CMS EFFECTIVENESS TO DRAIN SLOWLY AND FUNCTION AS ORIGINALLY DESIGNED. 13. FOR ALL INSTANCES OF NONCOMPLIANCE BASED ON ENVIRONMENTAL HAZARDS AND CHEMICAL SPILLS — NGAS ——— AND RELEASES, ALL NEEDED INFORMATION MUST BE PROVIDED ORALLY TO COPHE SPILL REPORTING LINE **EROSION CONTROL NOTES** (24-HOUR NUMBER FOR ENVIRONMENTAL HAZARDS AND CHEMICAL SPILLS AND RELEASES: 1-877-518-5608) WITHIN 24-HOURS FROM THE TIME THE OWNER/CONTRACTOR BECOMES AWARE OF THE CIRCUMSTANCES 1. CONTRACTOR TO INSPECT AND MAINTAIN EROSION 14. STRAW BALES SHALL NOT BE USED FOR PRIMARY EROSION OR SEDIMENT CONTROL (I.E. STRAW BALES MAY CONTROL MEASURES THROUGHOUT THE COURSE BE USED FOR REINFORCEMENT BEHIND ANOTHER BMP SUCH AS SILT FENCE). OF CONSTRUCTION, INCLUDING INSTALLING, 15. CONTROL MEASURES REFERRED TO AS "CUTBACK CURB" ARE NOT ALLOWED. THE CUTBACK CURB MAY REPAIRING, REPLACING, RELOCATING AND BECOME INEFFECTIVE AND MAY ALSO COMPROMISE THE INTEGRITY OF THE CURB AND IN MOST CASES MODIFYING AS NECESSARY FOR CONSTRUCTION, TO DOES NOT PROVIDE ANY WATER QUALITY BENEFIT FOR FILTERING OUT SEDIMENT ENSURE THE SITE IS IN COMPLIANCE WITH STATE 16. INLET PROTECTION AND VEGETATIVE BUFFER CONTROL MEASURES SHALL NOT BE USED AS STANDALONE AND LOCAL REQUIREMENTS.

- 2. REFER TO JURISDICTIONS EROSION CONTROL
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SCALE: 1" = 30'

CONTRACTOR TO FIELD VERIFY LOCATION OF ALL EXISTING UTILITES PRIOR TO CONSTRUCTION

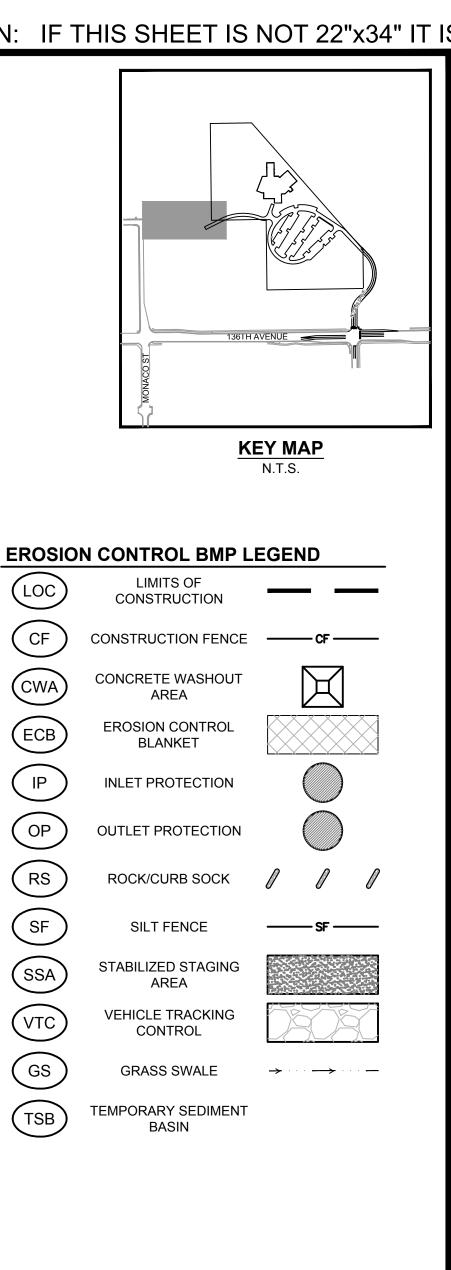
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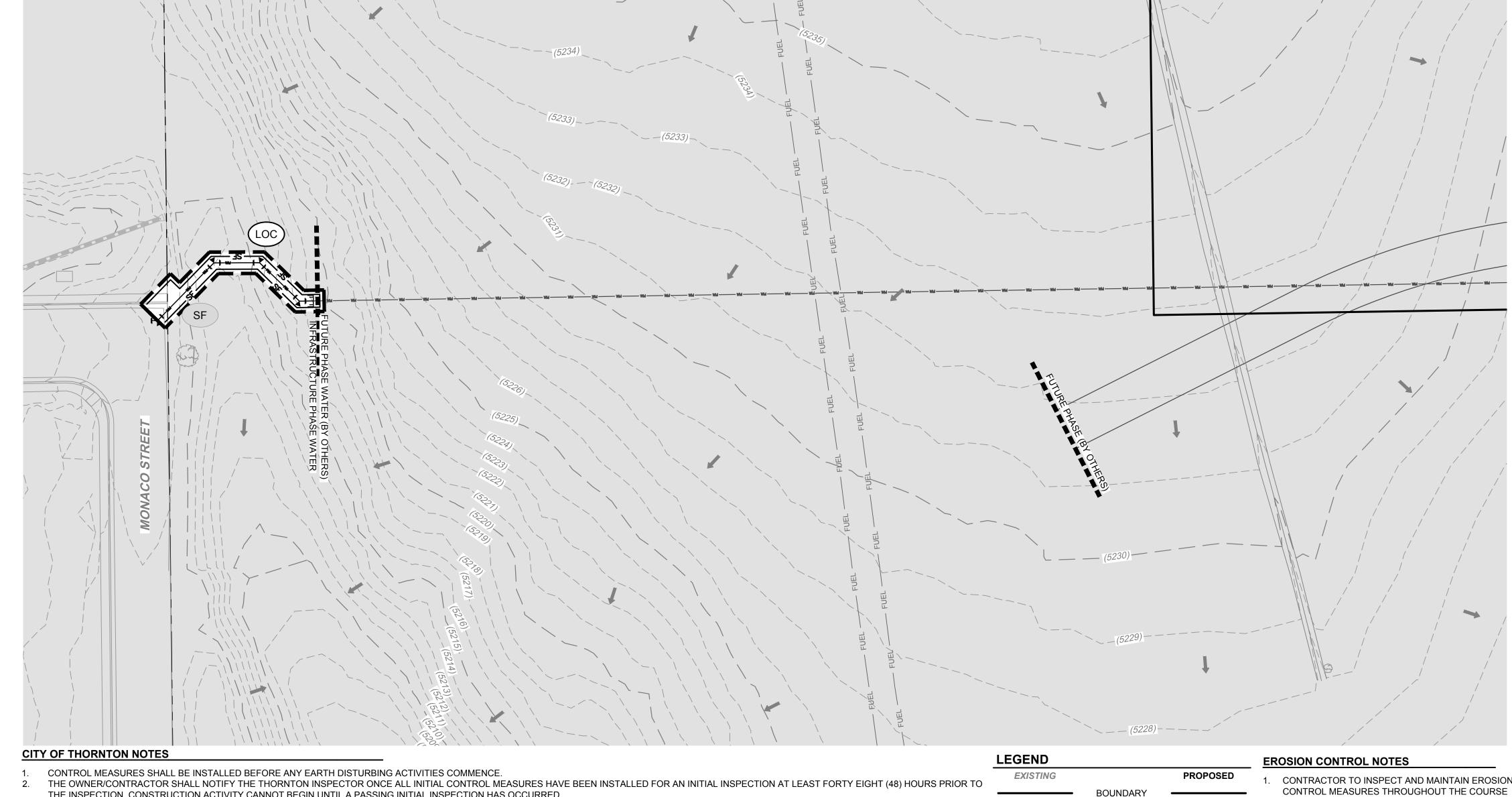
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- 19. A VEHICLE TRACKING CONTROL (VTC) SHALL BE PLACED AT ALL ENTRANCES/EXITS FROM THE SITE AS WELL AS ANY EGRESS FROM EXPOSED DIRT TO PAVED AREAS TO PREVENT TRACK-OUT ONTO STREETS. IF TRACK-OUT DOES OCCUR, THE OWNER/CONTRACTOR SHALL IMMEDIATELY SWEEP THE STREET OF DEBRIS. RECYCLED CRUSHED CONCRETE OR ASPHALT SHALL NOT BE USED FOR VEHICLE TRACKING PADS.
- 20. FOR RESIDENTIAL PROJECTS, BACK OF CURB PROTECTION IS REQUIRED ALONG ALL INTERIOR LOTS 21. ALL SEDIMENT COLLECTED IN CONTROL MEASURES SHALL BE REMOVED UPON INITIAL ACCEPTANCE.
- 22. WIND EROSION AND DUST CONTROL MEASURES MUST BE UTILIZED TO MINIMIZE AIRBORNE PARTICULATE DUST. CONTROL MEASURES MAY INCLUDE MINIMIZING DISTURBED AREAS, WATERING, AND/OR PROVIDING TEMPORARY STABILIZATION
- 23. PERMANENT EROSION CONTROL MEASURES FOR SLOPES, CHANNELS, DITCHES, OR ANY DISTURBED LAND AREA SHALL BE COMPLETED WITHIN 14 CALENDAR DAYS AFTER FINAL GRADING OR THE FINAL EARTH DISTURBANCE HAS BEEN COMPLETED. WHEN IT IS NOT POSSIBLE TO PERMANENTLY STABILIZE A DISTURBED AREA AFTER AN EARTH DISTURBANCE HAS BEEN COMPLETED OR WHERE SIGNIFICANT EARTH DISTURBANCE ACTIVITY CEASES, TEMPORARY SOIL EROSION CONTROL MEASURES SHALL BE IMPLEMENTED WITHIN 14 CALENDAR DAYS. TEMPORARY EROSION CONTROL MEASURES SHALL BE MAINTAINED UNTIL
- PERMANENT SOIL EROSION MEASURES ARE IMPLEMENTED. 24. FINAL STABILIZATION HAS BEEN ACHIEVED WHEN ALL EARTH DISTURBING ACTIVITIES AT THE SITE HAVE BEEN COMPLETED, AND UNIFORM VEGETATIVE COVER HAS BEEN ESTABLISHED WITH AN INDIVIDUAL PLANT DENSITY OF AT LEAST 70 PERCENT OF PRE-DISTURBANCE LEVELS, OR EQUIVALENT PERMANENT, PHYSICAL EROSION REDUCTION METHODS HAVE BEEN EMPLOYED.
- 25. ALL TEMPORARY CONTROL MEASURES SHALL BE REMOVED FROM THE SITE UPON SUBMITTING THE INACTIVATION NOTICE.
- 26. ALL SITE WASTES (INCLUDING TRASH AND BUILDING MATERIALS) MUST BE PROPERLY MANAGED TO PREVENT POTENTIAL POLLUTION DISCHARGES TO THE MS4 OR STATE WATERS.
- 27. STREET REPAIR OPERATIONS SUCH AS ROTOR MILLING, SLURRY SEAL AND CHIP SEAL. THE MINIMUM CMS REQUIRED ARE; INLET PROTECTION, CURB SOCKS AND STREET SWEEPING.

OF WARE MALCOMB

FOR AND ON BEHALF

Z	
JOB NO.:	DCS22-4022
PA / PM:	J. MANN
DRAWN BY:	I. CRAWFORD
DATE:	6/13/2023





- THE INSPECTION. CONSTRUCTION ACTIVITY CANNOT BEGIN UNTIL A PASSING INITIAL INSPECTION HAS OCCURRED.
- STORMWATER DISCHARGES FROM CONSTRUCTION ACTIVITIES SHALL NOT CAUSE, HAVE THE REASONABLE POTENTIAL TO CAUSE, OR MEASURABLY CONTRIBUTE TO EXCEED ANY WATER QUALITY STANDARD. CONSTRUCTION SHALL BE PHASED IN A MANNER TO LIMIT EARTH DISTURBING ACTIVITIES (I.E. THE ENTIRE PROJECT SITE SHOULD NOT BE DISTURBED IF CONSTRUCTION WILL ONLY BE OCCURRING IN ONE PARTICULAR SECTION).
- SEDIMENT CAUSED BY ACCELERATED SOIL EROSION SHALL BE REMOVED FROM RUNOFF WATER BEFORE IT LEAVES THE CONSTRUCTION SITE.
- BULK STORAGE STRUCTURES FOR PETROLEUM PRODUCTS AND ANY OTHER CHEMICALS SHALL HAVE SECONDARY CONTAINMENT OR EQUIVALENT PROTECTION TO CONTAIN ALL SPILLS AND PREVENT ANY SPILLED MATERIAL FROM ENTERING THE MS4 OR STATE WATERS.
- A COPY OF THE SWMP AND EROSION AND SEDIMENT CONTROL (ESC) PLANS MUST BE AVAILABLE AT ALL TIMES ON THE CONSTRUCTION SITE UNLESS OTHERWISE APPROVED BY CDPHE OR THORNTON.
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- CONTROL MEASURES INTENDED FOR SHEET FLOW SEDIMENT RUNOFF SHALL BE PLACED PARALLEL TO THE SLOPE.
- 18. ALL CONTROL MEASURES SHALL BE CLEANED WHEN SEDIMENT LEVELS ACCUMULATE TO HALF THE DESIGN OF THE CM UNLESS OTHERWISE SPECIFIED.
- 19. A VEHICLE TRACKING CONTROL (VTC) SHALL BE PLACED AT ALL ENTRANCES/EXITS FROM THE SITE AS WELL AS ANY EGRESS FROM EXPOSED DIRT TO PAVED AREAS TO PREVENT TRACK-OUT ONTO STREETS. IF TRACK-OUT DOES OCCUR, THE OWNER/CONTRACTOR SHALL IMMEDIATELY SWEEP THE STREET OF DEBRIS. RECYCLED CRUSHED CONCRETE OR ASPHALT SHALL NOT BE USED FOR VEHICLE TRACKING PADS.
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- CONTRACTOR TO INSPECT AND MAINTAIN EROSION CONTROL MEASURES THROUGHOUT THE COURSE OF CONSTRUCTION, INCLUDING INSTALLING, REPAIRING, REPLACING, RELOCATING AND MODIFYING AS NECESSARY FOR CONSTRUCTION, TO ENSURE THE SITE IS IN COMPLIANCE WITH STATE AND LOCAL REQUIREMENTS.
- REFER TO JURISDICTIONS EROSION CONTROL STANDARDS AND SPECIFICATIONS.

EASEMENT

CENTERLINE

— −(5280)— — MAJOR CONTOUR — 5280 —

CURB / GUTTER

BUILDING

SIDEWALK

CURB RAMPS

TREES

STORM DRAIN

OVERHEAD UTILITY

UTILITY POLE

DOWN GUY

LIGHT POLE

ICC/A117.1 ACCESSIBLE ROUTE -----

MINOR CONTOUR —— 5278 ——

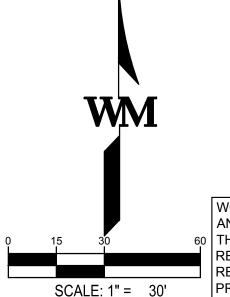
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- ADDITIONAL EROSION CONTROL MEASURES NOT SHOWN ON THIS PLAN MAY BE NECESSARY TO PREVENT EROSION AND SEDIMENTATION.
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LOCATION OF ALL EXISTING UTILITES PRIOR TO CONSTRUCTION

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CONTRACTOR TO FIELD VERIFY

I. CRAWFORD 6/13/2023

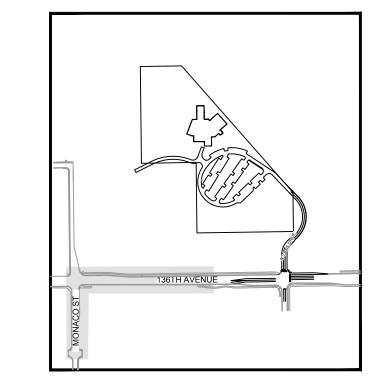
PA / PM:

DRAWN BY:

DCS22-4022

J. MANN

FOR AND ON BEHALF



EROSION CONTROL BMP LEGEND

LOC CONSTRUCTION

CONSTRUCTION FENCE

BLANKET

(CWA) **EROSION CONTROL** [ECB]

ΙP

SF SILT FENCE

STABILIZED STAGING SSA **VEHICLE TRACKING**

GS

TEMPORARY SEDIMENT

TSB

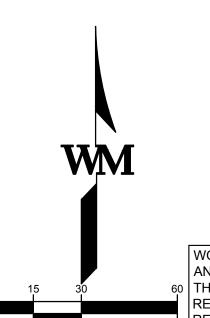
EROSION CONTROL NOTES

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CONCRETE WASHOUT

INLET PROTECTION

OUTLET PROTECTION

VTC CONTROL

GRASS SWALE

1. CONTRACTOR TO INSPECT AND MAINTAIN EROSION MODIFYING AS NECESSARY FOR CONSTRUCTION, TO

2. REFER TO JURISDICTIONS EROSION CONTROL STANDARDS AND SPECIFICATIONS.

FUTURE PHASE SANITARY (BY OTHERS

PREVENT EROSION AND SEDIMENTATION.

FOR AND ON BEHALF

OF WARE MALCOMB

JOB NO.: DCS22-4022 PA / PM: J. MANN DRAWN BY: I. CRAWFORD 6/13/2023

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LOC

- NGAS - NGAS -

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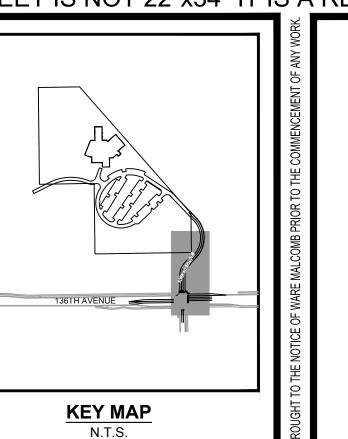
21. ALL SEDIMENT COLLECTED IN CONTROL MEASURES SHALL BE REMOVED UPON INITIAL ACCEPTANCE. 22. WIND EROSION AND DUST CONTROL MEASURES MUST BE UTILIZED TO MINIMIZE AIRBORNE PARTICULATE DUST. CONTROL MEASURES MAY INCLUDE MINIMIZING DISTURBED AREAS, WATERING, AND/OR PROVIDING TEMPORARY STABILIZATION

23. PERMANENT EROSION CONTROL MEASURES FOR SLOPES, CHANNELS, DITCHES, OR ANY DISTURBED LAND AREA SHALL BE COMPLETED WITHIN 14 CALENDAR DAYS AFTER FINAL GRADING OR THE FINAL EARTH DISTURBANCE HAS BEEN COMPLETED. WHEN IT IS NOT POSSIBLE TO PERMANENTLY STABILIZE A DISTURBED AREA AFTER AN EARTH DISTURBANCE HAS BEEN COMPLETED OR WHERE SIGNIFICANT EARTH DISTURBANCE ACTIVITY CEASES, TEMPORARY SOIL EROSION CONTROL MEASURES SHALL BE IMPLEMENTED WITHIN 14 CALENDAR DAYS. TEMPORARY EROSION CONTROL MEASURES SHALL BE MAINTAINED UNTIL PERMANENT SOIL EROSION MEASURES ARE IMPLEMENTED.

24. FINAL STABILIZATION HAS BEEN ACHIEVED WHEN ALL EARTH DISTURBING ACTIVITIES AT THE SITE HAVE BEEN COMPLETED, AND UNIFORM VEGETATIVE COVER HAS BEEN ESTABLISHED WITH AN INDIVIDUAL PLANT DENSITY OF AT LEAST 70 PERCENT OF PRE-DISTURBANCE LEVELS, OR EQUIVALENT PERMANENT, PHYSICAL EROSION REDUCTION METHODS HAVE BEEN EMPLOYED.

25. ALL TEMPORARY CONTROL MEASURES SHALL BE REMOVED FROM THE SITE UPON SUBMITTING THE 26. ALL SITE WASTES (INCLUDING TRASH AND BUILDING MATERIALS) MUST BE PROPERLY MANAGED TO

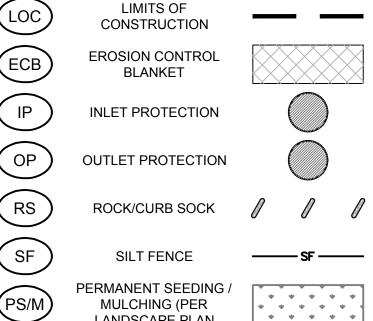
PREVENT POTENTIAL POLLUTION DISCHARGES TO THE MS4 OR STATE WATERS. 27. STREET REPAIR OPERATIONS SUCH AS ROTOR MILLING, SLURRY SEAL AND CHIP SEAL. THE MINIMUM CMS REQUIRED ARE; INLET PROTECTION, CURB SOCKS AND STREET SWEEPING.



LIMITS OF CONSTRUCTION **EROSION CONTROL** ECB) BLANKET **INLET PROTECTION** OP **OUTLET PROTECTION** RS ROCK/CURB SOCK SILT FENCE PERMANENT SEEDING / * * * * * MULCHING (PER

LANDSCAPE PLAN

EROSION CONTROL BMP LEGEND



GRASS SWALE

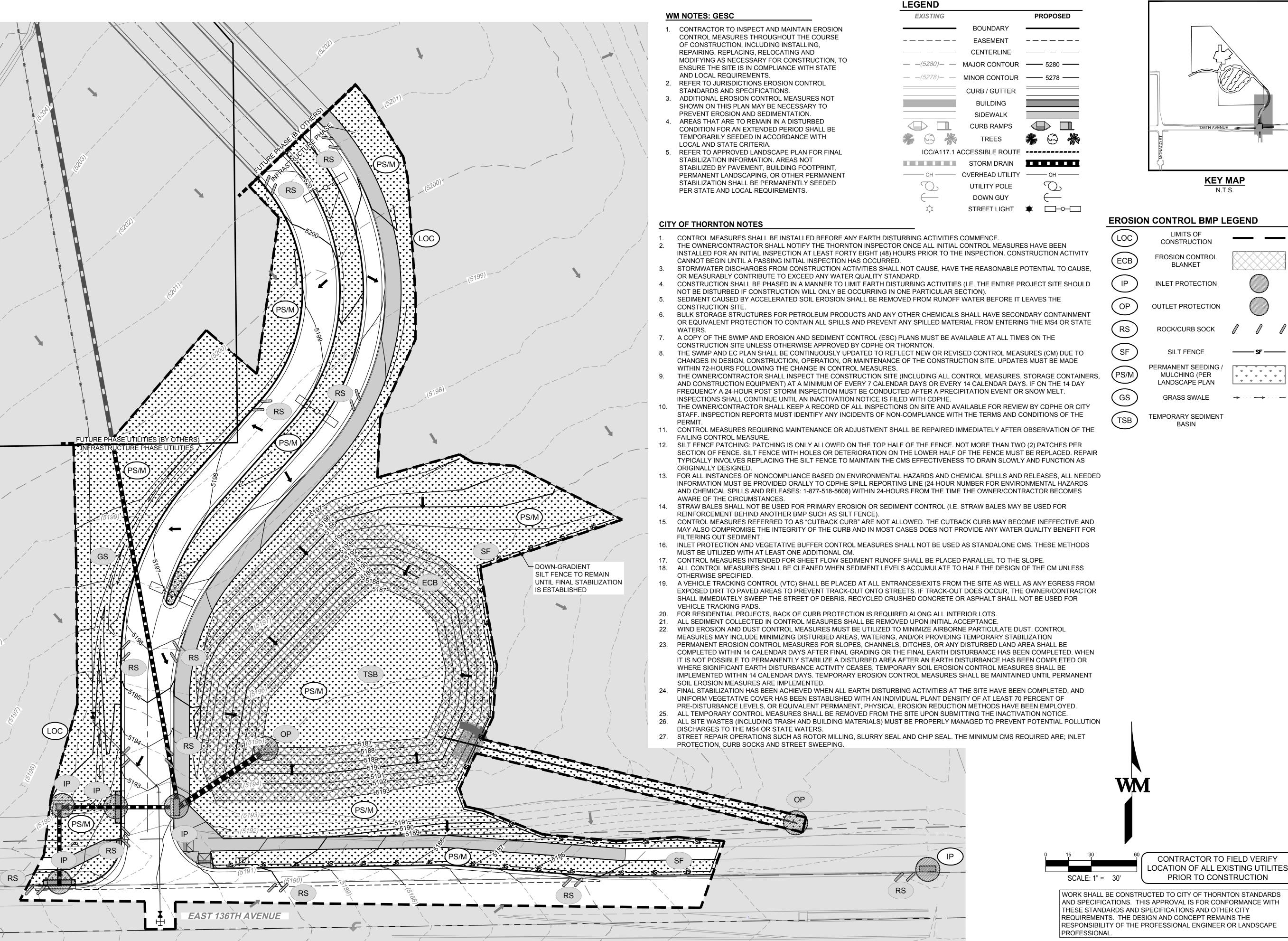
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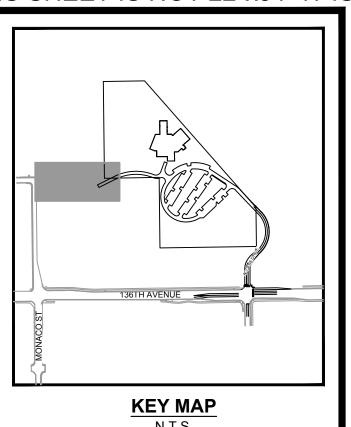
TEMPORARY SEDIMENT TSB

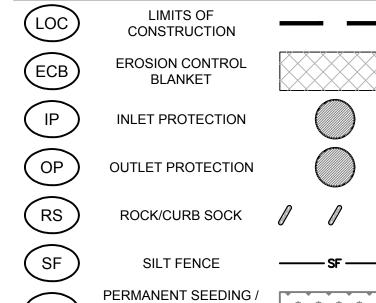
FOR AND ON BEHALF

OF WARE MALCOMB

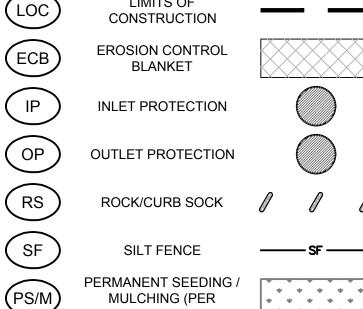
JOB NO.: DCS22-4022 PA / PM: J. MANN DRAWN BY: I. CRAWFORD 6/13/2023

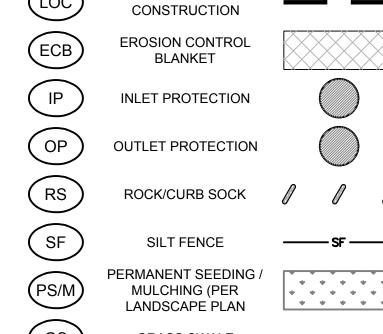






EROSION CONTROL BMP LEGEND





FOR AND ON BEHALF

OF WARE MALCOMB

LIBRAR

JOB NO.: DCS22-4022 PA / PM: J. MANN DRAWN BY: I. CRAWFORD

6/13/23

WM NOTES: GESC

REQUIREMENTS.

- 1. CONTRACTOR TO INSPECT AND MAINTAIN EROSION CONTROL MEASURES THROUGHOUT THE COURSE OF CONSTRUCTION, INCLUDING INSTALLING, REPAIRING, REPLACING, RELOCATING AND MODIFYING AS NECESSARY FOR CONSTRUCTION, TO ENSURE THE SITE IS IN COMPLIANCE WITH STATE AND LOCAL REQUIREMENTS.
- 2. REFER TO JURISDICTIONS EROSION CONTROL STANDARDS AND SPECIFICATIONS ADDITIONAL EROSION CONTROL MEASURES NOT SHOWN ON THIS PLAN MAY BE NECESSARY TO
- PREVENT EROSION AND SEDIMENTATION. 4. AREAS THAT ARE TO REMAIN IN A DISTURBED CONDITION FOR AN EXTENDED PERIOD SHALL BE
- TEMPORARILY SEEDED IN ACCORDANCE WITH LOCAL AND STATE CRITERIA. 5. REFER TO APPROVED LANDSCAPE PLAN FOR FINAL STABILIZATION INFORMATION, AREAS NOT STABILIZED BY PAVEMENT, BUILDING FOOTPRINT, PERMANENT LANDSCAPING, OR OTHER PERMANENT STABILIZATION SHALL BE PERMANENTLY SEEDED PER STATE AND LOCAL

LEGEND

EXISTING		PROPOSED
	BOUNDARY	
	EASEMENT	
	CENTERLINE	
— <i>-(5280)</i> — —	MAJOR CONTOUR	
— <i>-(5278)</i> — —	MINOR CONTOUR	
	CURB / GUTTER	
	BUILDING	
	SIDEWALK	
	CURB RAMPS	
	TREES	
ICC/A117.1	ACCESSIBLE ROUTE	
	STORM DRAIN	
——— OH ———	OVERHEAD UTILITY	—— ОН ——
	UTILITY POLE	
$\overline{}$	DOWN GUY	\leftarrow

LIGHT POLE

SCALE: 1" = 30'

CONTRACTOR TO FIELD VERIFY LOCATION OF ALL EXISTING UTILITES PRIOR TO CONSTRUCTION

WORK SHALL BE CONSTRUCTED TO CITY OF THORNTON STANDARDS AND SPECIFICATIONS. THIS APPROVAL IS FOR CONFORMANCE WITH THESE STANDARDS AND SPECIFICATIONS AND OTHER CITY REQUIREMENTS. THE DESIGN AND CONCEPT REMAINS THE RESPONSIBILITY OF THE PROFESSIONAL ENGINEER OR LANDSCAPE PROFESSIONAL.

CITY OF THORNTON NOTES

CONTROL MEASURES SHALL BE INSTALLED BEFORE ANY EARTH DISTURBING ACTIVITIES COMMENCE

THE OWNER/CONTRACTOR SHALL NOTIFY THE THORNTON INSPECTOR ONCE ALL INITIAL CONTROL MEASURES HAVE BEEN INSTALLED FOR AN INITIAL INSPECTION AT LEAST FORTY EIGHT (48) HOURS PRIOR TO THE INSPECTION. CONSTRUCTION ACTIVITY CANNOT BEGIN UNTIL A PASSING INITIAL INSPECTION HAS OCCURRED.

STORMWATER DISCHARGES FROM CONSTRUCTION ACTIVITIES SHALL NOT CAUSE, HAVE THE REASONABLE POTENTIAL TO CAUSE, OR MEASURABLY CONTRIBUTE TO EXCEED ANY WATER QUALITY STANDARD. CONSTRUCTION SHALL BE PHASED IN A MANNER TO LIMIT EARTH DISTURBING ACTIVITIES (I.E. THE ENTIRE PROJECT SITE SHOULD NOT BE DISTURBED IF CONSTRUCTION WILL ONLY BE OCCURRING IN ONE PARTICULAR SEDIMENT CAUSED BY ACCELERATED SOIL EROSION SHALL BE REMOVED FROM RUNOFF WATER BEFORE IT LEAVES THE CONSTRUCTION SITE.

BULK STORAGE STRUCTURES FOR PETROLEUM PRODUCTS AND ANY OTHER CHEMICALS SHALL HAVE SECONDARY CONTAINMENT OR EQUIVALENT PROTECTION TO CONTAIN ALL SPILLS AND PREVENT ANY SPILLED MATERIAL FROM ENTERING THE MS4 OR STATE WATERS.

A COPY OF THE SWMP AND EROSION AND SEDIMENT CONTROL (ESC) PLANS MUST BE AVAILABLE AT ALL TIMES ON THE CONSTRUCTION SITE UNLESS OTHERWISE APPROVED BY CDPHE OR THORNTON. THE SWMP AND EC PLAN SHALL BE CONTINUOUSLY UPDATED TO REFLECT NEW OR REVISED CONTROL MEASURES (CM) DUE TO CHANGES IN DESIGN, CONSTRUCTION, OPERATION, OR MAINTENANCE OF THE CONSTRUCTION SITE. UPDATES MUST BE MADE WITHIN 72-HOURS FOLLOWING THE CHANGE IN CONTROL MEASURES.

THE OWNER/CONTRACTOR SHALL INSPECT THE CONSTRUCTION SITE (INCLUDING ALL CONTROL MEASURES, STORAGE CONTAINERS, AND CONSTRUCTION EQUIPMENT) AT A MINIMUM OF EVERY 7 CALENDAR DAYS OR EVERY 14 CALENDAR DAYS. IF ON THE 14 DAY FREQUENCY A 24-HOUR POST STORM INSPECTION MUST BE CONDUCTED AFTER A PRECIPITATION EVENT OR SNOW MELT. INSPECTIONS SHALL CONTINUE UNTIL AN INACTIVATION NOTICE IS FILED WITH CDPHE.

10. THE OWNER/CONTRACTOR SHALL KEEP A RECORD OF ALL INSPECTIONS ON SITE AND AVAILABLE FOR REVIEW BY CDPHE OR CITY STAFF. INSPECTION REPORTS MUST IDENTIFY ANY INCIDENTS OF NON-COMPLIANCE WITH THE TERMS AND CONDITIONS OF THE PERMIT.

CONTROL MEASURES REQUIRING MAINTENANCE OR ADJUSTMENT SHALL BE REPAIRED IMMEDIATELY AFTER OBSERVATION OF THE FAILING CONTROL MEASURE. 12. SILT FENCE PATCHING: PATCHING IS ONLY ALLOWED ON THE TOP HALF OF THE FENCE. NOT MORE THAN TWO (2) PATCHES PER SECTION OF FENCE. SILT FENCE WITH HOLES OR DETERIORATION ON THE LOWER HALF OF THE FENCE MUST BE REPLACED. REPAIR TYPICALLY INVOLVES REPLACING THE SILT FENCE TO MAINTAIN THE CMS EFFECTIVENESS TO DRAIN SLOWLY AND FUNCTION AS ORIGINALLY DESIGNED.

13. FOR ALL INSTANCES OF NONCOMPLIANCE BASED ON ENVIRONMENTAL HAZARDS AND CHEMICAL SPILLS AND RELEASES, ALL NEEDED INFORMATION MUST BE PROVIDED ORALLY TO CDPHE SPILL REPORTING LINE (24-HOUR NUMBER FOR ENVIRONMENTAL HAZARDS AND CHEMICAL SPILLS AND RELEASES: 1-877-518-5608) WITHIN 24-HOURS FROM THE TIME THE OWNER/CONTRACTOR BECOMES AWARE OF THE CIRCUMSTANCES.

14. STRAW BALES SHALL NOT BE USED FOR PRIMARY EROSION OR SEDIMENT CONTROL (I.E. STRAW BALES MAY BE USED FOR REINFORCEMENT BEHIND ANOTHER BMP SUCH AS SILT FENCE). CONTROL MEASURES REFERRED TO AS "CUTBACK CURB" ARE NOT ALLOWED. THE CUTBACK CURB MAY BECOME INEFFECTIVE AND MAY ALSO COMPROMISE THE INTEGRITY OF THE CURB AND IN MOST CASES DOES NOT

PROVIDE ANY WATER QUALITY BENEFIT FOR FILTERING OUT SEDIMENT. INLET PROTECTION AND VEGETATIVE BUFFER CONTROL MEASURES SHALL NOT BE USED AS STANDALONE CMS. THESE METHODS MUST BE UTILIZED WITH AT LEAST ONE ADDITIONAL CM.

CONTROL MEASURES INTENDED FOR SHEET FLOW SEDIMENT RUNOFF SHALL BE PLACED PARALLEL TO THE SLOPE.

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A VEHICLE TRACKING CONTROL (VTC) SHALL BE PLACED AT ALL ENTRANCES/EXITS FROM THE SITE AS WELL AS ANY EGRESS FROM EXPOSED DIRT TO PAVED AREAS TO PREVENT TRACK-OUT ONTO STREETS. IF TRACK-OUT DOES OCCUR, THE OWNER/CONTRACTOR SHALL IMMEDIATELY SWEEP THE STREET OF DEBRIS. RECYCLED CRUSHED CONCRETE OR ASPHALT SHALL NOT BE USED FOR VEHICLE TRACKING PADS. FOR RESIDENTIAL PROJECTS, BACK OF CURB PROTECTION IS REQUIRED ALONG ALL INTERIOR LOTS.

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22. WIND EROSION AND DUST CONTROL MEASURES MUST BE UTILIZED TO MINIMIZE AIRBORNE PARTICULATE DUST. CONTROL MEASURES MAY INCLUDE MINIMIZING DISTURBED AREAS, WATERING, AND/OR PROVIDING TEMPORARY STABILIZATION

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STREET REPAIR OPERATIONS SUCH AS ROTOR MILLING, SLURRY SEAL AND CHIP SEAL. THE MINIMUM CMS REQUIRED ARE; INLET PROTECTION, CURB SOCKS AND STREET SWEEPING.

EROSION CONTROL BMP LEGEND

LOC LIMITS OF CONSTRUCTION **EROSION CONTROL** (ECB) BLANKET **INLET PROTECTION**

ROCK/CURB SOCK

SILT FENCE PERMANENT SEEDING /

LANDSCAPE PLAN **GRASS SWALE**

(PS/M)



FOR AND ON BEHALF OF WARE MALCOMB

TEMPORARY SEDIMENT

OP **OUTLET PROTECTION**





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CITY OF THORNTON NOTES

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WM NOTES: GESC

REQUIREMENTS.

LEGEND

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2. REFER TO JURISDICTIONS EROSION CONTROL STANDARDS AND SPECIFICATIONS. 3. ADDITIONAL EROSION CONTROL MEASURES NOT SHOWN ON THIS PLAN MAY BE NECESSARY TO

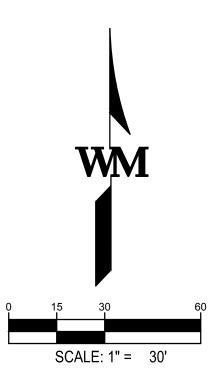
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PERMANENT STABILIZATION SHALL BE PERMANENTLY SEEDED PER STATE AND LOCAL

PROPOSED **EXISTING** BOUNDARY EASEMENT _ _ _ _ _ _ _ _ _____ CENTERLINE — — — — −(5280)— — MAJOR CONTOUR — 5280 — *— –(5278)— —* MINOR CONTOUR —— 5278 —— CURB / GUTTER BUILDING SIDEWALK CURB RAMPS ICC/A117.1 ACCESSIBLE ROUTE -----STORM DRAIN OVERHEAD UTILITY ——— OH ——— —— OH ——— UTILITY POLE DOWN GUY

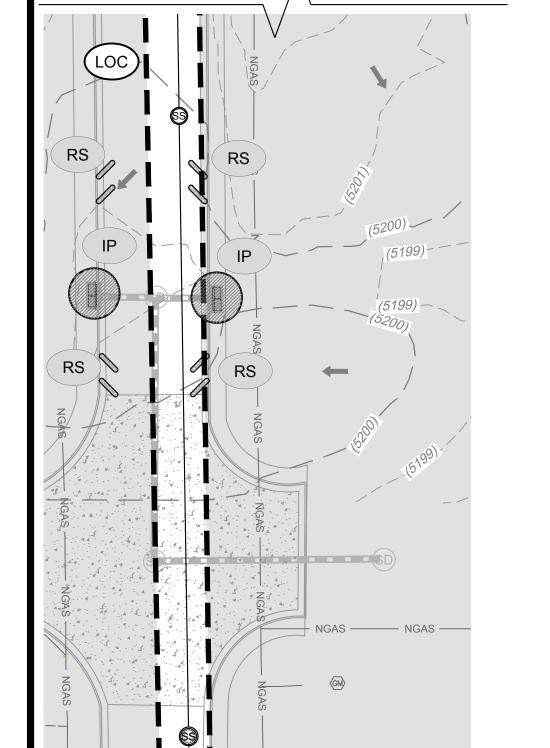
LIGHT POLE



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JOB NO.: DCS22-4022 PA / PM: J. MANN DRAWN BY: I. CRAWFORD 6/13/23



- NGAS ---

Inlet Protection (IP)

NO O

IBRAR

YNIH.

CWA 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

4. THE CWA SHALL BE REPAIRED, CLEANED, OR ENLARGED AS NECESSARY TO MAINTAIN CAPACITY FOR CONCRETE WASTE. CONCRETE MATERIALS, ACCUMULATED IN PIT, SHALL BE REMOVED ONCE THE MATERIALS HAVE REACHED A DEPTH OF 2'.

5. 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.

6. THE CWA SHALL REMAIN IN PLACE UNTIL ALL CONCRETE FOR THE PROJECT IS PLACED. 7. WHEN THE CWA IS REMOVED, COVER THE DISTURBED AREA WITH TOP SOIL, SEED AND MULCH OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE LOCAL JURISDICTION.

(DETAIL ADAPTED FROM DOUGLAS COUNTY, COLORADO AND THE CITY OF PARKER, COLORADO, NOT AVAILABLE IN AUTOCAD). NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

SC-6

GENERAL INLET PROTECTION INSTALLATION NOTES

 SEE PLAN VIEW FOR:

 LOCATION OF INLET PROTECTION.

 -TYPE OF INLET PROTECTION (IP.1, IP.2, IP.3, IP.4, IP.5, IP.6)

2. INLET PROTECTION SHALL BE INSTALLED PROMPTLY AFTER INLET CONSTRUCTION OR PAVING IS COMPLETE (TYPICALLY WITHIN 48 HOURS). IF A RAINFALL/RUNOFF EVENT IS FORECAST, INSTALL INLET PROTECTION PRIOR TO ONSET OF EVENT.

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3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.

4. SEDIMENT ACCUMULATED UPSTREAM OF INLET PROTECTION SHALL BE REMOVED AS NECESSARY TO MAINTAIN BMP EFFECTIVENESS, TYPICALLY WHEN STORAGE VOLUME REACHES 50% OF CAPACITY, A DEPTH OF 6" WHEN SILT FENCE IS USED, OR 1/4 OF THE HEIGHT FOR

5. INLET PROTECTION IS TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS PERMANENTLY STABILIZED, UNLESS THE LOCAL JURISDICTION APPROVES EARLIER REMOVAL OF INLET PROTECTION IN STREETS.

6. WHEN INLET PROTECTION AT AREA INLETS IS REMOVED, THE DISTURBED AREA SHALL BE COVERED WITH TOP SOIL, SEEDED AND MULCHED, OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE LOCAL JURISDICTION.

(DETAIL ADAPTED FROM TOWN OF PARKER, COLORADO AND CITY OF AURORA, COLORADO, NOT AVAILABLE IN AUTOCAD) NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

NOTE: THE DETAILS INCLUDED WITH THIS FACT SHEET SHOW COMMONLY USED, CONVENTIONAL METHODS OF INLET PROTECTION IN THE DENVER METROPOLITAN AREA. THERE ARE MANY PROPRIETARY INLET PROTECTION METHODS ON THE MARKET. UDFCD NEITHER ENDORSES NOR DISCOURAGES USE OF PROPRIETARY INLET PROTECTION; HOWEVER, IN THE EVENT PROPRIETARY METHODS ARE USED, THE APPROPRIATE DETAIL FROM THE MANUFACTURER MUST BE INCLUDED IN THE SWMP AND THE BMP MUST BE INSTALLED AND MAINTAINED AS SHOWN IN THE MANUFACTURER'S DETAILS IN THE MANUFACTURER'S DETAILS.

NOTE: SOME MUNICIPALITIES DISCOURAGE OR PROHIBIT THE USE OF STRAW BALES FOR INLET PROTECTION. CHECK WITH LOCAL JURISDICTION TO DETERMINE IF STRAW BALE INLET

MM-1

Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 August 2013

Concrete Washout Area (CWA)

Inlet Protection (IP)

ROCK SOCK -

MM-1

IP-5

SC-6

- INLET GRATE

IP-3. ROCK SOCK SUMP/AREA INLET PROTECTION

2. STRAW WATTLES/SEDIMENT CONTROL LOGS MAY BE USED IN PLACE OF ROCK SOCKS FOR INLETS IN PERVIOUS AREAS, INSTALL PER SEDIMENT CONTROL LOG DETAIL.

IP-4. SILT FENCE FOR SUMP INLET PROTECTION

2. POSTS SHALL BE PLACED AT EACH CORNER OF THE INLET AND AROUND THE EDGES

3. STRAW WATTLES/SEDIMENT CONTROL LOGS MAY BE USED IN PLACE OF SILT FENCE FOR INLETS IN PERVIOUS AREAS. INSTALL PER SEDIMENT CONTROL LOG DETAIL.

ROCK SOCK SUMP/AREA INLET PROTECTION INSTALLATION NOTES

1. SEE ROCK SOCK DESIGN DETAIL FOR INSTALLATION REQUIREMENTS.

SILT FENCE INLET PROTECTION INSTALLATION NOTES

AT A MAXIMUM SPACING OF 3 FEET

August 2013

1. SEE SILT FENCE DESIGN DETAIL FOR INSTALLATION REQUIREMENTS.

Urban Drainage and Flood Control District

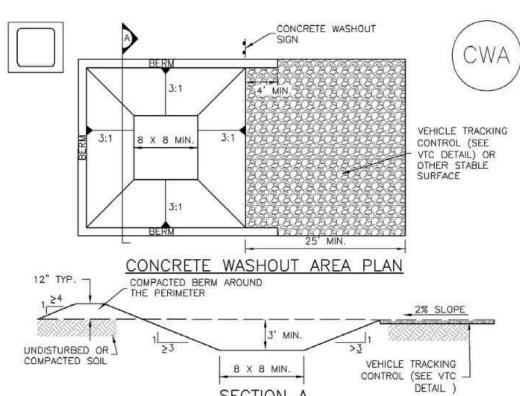
Urban Storm Drainage Criteria Manual Volume 3

SEE ROCK SOCK DETAIL

SILT FENCE (SEE SILT

FENCE DESIGN DETAIL)

FOR JOINTING



CWA-1. CONCRETE WASHOUT AREA CWA INSTALLATION NOTES

WATERBODY, DO NOT LOCATE WITHIN 1,000' OF ANY WELLS OR DRINKING WATER SOURCES, IF THE CWA MUST BE INSTALLED WITH AN IMPERMEABLE LINER (16 MIL MIN. THICKNESS) OF SURFACE STORAGE ALTERNATIVES USING PREFABRICATED CONCRETE WASHOUT DEVICES OR A LINED ABOVE GROUND STORAGE ARE SHOULD BE USED.

4. CWA SHALL INCLUDE A FLAT SUBSURFACE PIT THAT IS AT LEAST 8' BY 8' SLOPES LEADING OUT OF THE SUBSURFACE PIT SHALL BE 3:1 OR FLATTER. THE PIT SHALL BE AT

6. VEHICLE TRACKING PAD SHALL BE SLOPED 2% TOWARDS THE CWA.

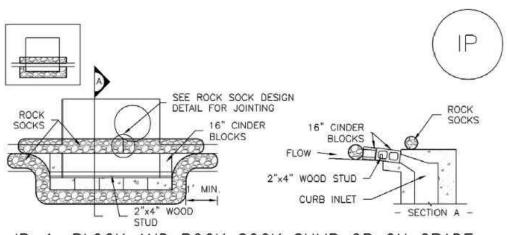
ELSEWHERE AS NECESSARY TO CLEARLY INDICATE THE LOCATION OF THE CWA TO OPERATORS

8. USE EXCAVATED MATERIAL FOR PERIMETER BERM CONSTRUCTION.

Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3

November 2010

DCS22-4022 JOB NO .: PA / PM: J. MANN I. CRAWFORD DRAWN BY: 6/13/2023



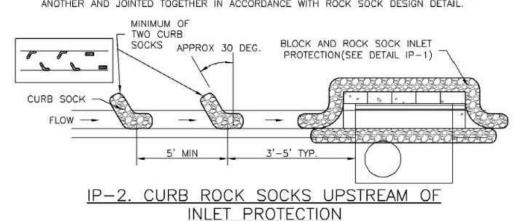
Inlet Protection (IP)

IP-1. BLOCK AND ROCK SOCK SUMP OR ON GRADE INLET PROTECTION

BLOCK AND CURB SOCK INLET PROTECTION INSTALLATION NOTES

 SEE ROCK SOCK DESIGN DETAIL FOR INSTALLATION REQUIREMENTS. 2. CONCRETE "CINDER" BLOCKS SHALL BE LAID ON THEIR SIDES AROUND THE INLET IN A SINGLE ROW, ABUTTING ONE ANOTHER WITH THE OPEN END FACING AWAY FROM THE CURB.

3. GRAVEL BAGS SHALL BE PLACED AROUND CONCRETE BLOCKS, CLOSELY ABUTTING ONE ANOTHER AND JOINTED TOGETHER IN ACCORDANCE WITH ROCK SOCK DESIGN DETAIL.



CURB ROCK SOCK INLET PROTECTION INSTALLATION NOTES

1. SEE ROCK SOCK DESIGN DETAIL INSTALLATION REQUIREMENTS.

2. PLACEMENT OF THE SOCK SHALL BE APPROXIMATELY 30 DEGREES FROM PERPENDICULAR

IN THE OPPOSITE DIRECTION OF FLOW.

3. SOCKS ARE TO BE FLUSH WITH THE CURB AND SPACED A MINIMUM OF 5 FEET APART. 4. AT LEAST TWO CURB SOCKS IN SERIES ARE REQUIRED UPSTREAM OF ON-GRADE INLETS.

Urban Drainage and Flood Control District

Urban Storm Drainage Criteria Manual Volume 3

SC-6

Mulching (MU)

August 2013

- Clean, weed-free and seed-free cereal grain straw should be applied evenly at a rate of 2 tons per acre and must be tacked or fastened by a method suitable for the condition of the site. Straw mulch must be anchored (and not merely placed) on the surface. This can be accomplished mechanically by crimping or with the aid of tackifiers or nets. Anchoring with a crimping implement is preferred, and is the recommended method for areas flatter than 3:1. Mechanical crimpers must be capable of tucking the long mulch fibers into the soil to a depth of 3 inches without cutting them. An agricultural disk, while not an ideal substitute, may work if the disk blades are dull or blunted and set vertically; however, the frame may have to be weighted to afford proper soil penetration.
- Grass hay may be used in place of straw; however, because hay is comprised of the entire plant including seed, mulching with hay may seed the site with non-native grass species which might in turn out-compete the native seed. Alternatively, native species of grass hay may be purchased, but can be difficult to find and are more expensive than straw. Purchasing and utilizing a certified weed-free straw is an easier and less costly mulching method. When using grass hay, follow the same guidelines as for straw (provided
- On small areas sheltered from the wind and heavy runoff, spraying a tackifier on the mulch is satisfactory for holding it in place. For steep slopes and special situations where greater control is needed, erosion control blankets anchored with stakes should be used instead of mulch.
- Hydraulic mulching consists of wood cellulose fibers mixed with water and a tackifying agent and should be applied at a rate of no less than 1,500 pounds per acre (1,425 lbs of fibers mixed with at least 75 lbs of tackifier) with a hydraulic mulcher. For steeper slopes, up to 2000 pounds per acre may be required for effective hydroseeding. Hydromulch typically requires up to 24 hours to dry; therefore, it should not be applied immediately prior to inclement weather. Application to roads, waterways and existing vegetation should be avoided.
- Erosion control mats, blankets, or nets are recommended to help stabilize steep slopes (generally 3:1 and steeper) and waterways. Depending on the product, these may be used alone or in conjunction with grass or straw mulch. Normally, use of these products will be restricted to relatively small areas. Biodegradable mats made of straw and jute, straw-coconut, coconut fiber, or excelsior can be used instead of mulch. (See the ECM/TRM BMP for more information.)
- Some tackifiers or binders may be used to anchor mulch. Check with the local jurisdiction for allowed tackifiers. Manufacturer's recommendations should be followed at all times. (See the Soil Binder BMP for more information on general types of tackifiers.)
- Rock can also be used as mulch. It provides protection of exposed soils to wind and water erosion and allows infiltration of precipitation. An aggregate base course can be spread on disturbed areas for temporary or permanent stabilization. The rock mulch layer should be thick enough to provide full coverage of exposed soil on the area it is applied.

Maintenance and Removal

After mulching, the bare ground surface should not be more than 10 percent exposed. Reapply mulch, as needed, to cover bare areas.

Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 June 2012

November 2010

Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 CWA-3

SECTION A

SEE PLAN VIEW FOR:
 CWA INSTALLATION LOCATION.

2. DO NOT LOCATE AN UNLINED CWA WITHIN 400' OF ANY NATURAL DRAINAGE PATHWAY OR SITE CONSTRAINTS MAKE THIS INFEASIBLE, OR IF HIGHLY PERMEABLE SOILS EXIST ON SITE,

3. THE CWA SHALL BE INSTALLED PRIOR TO CONCRETE PLACEMENT ON SITE.

5. BERM SURROUNDING SIDES AND BACK OF THE CWA SHALL HAVE MINIMUM HEIGHT OF 1'.

7. SIGNS SHALL BE PLACED AT THE CONSTRUCTION ENTRANCE, AT THE CWA, AND OF CONCRETE TRUCKS AND PUMP RIGS.

Rock Sock (RS)

1½" (MINUS) CRUSHED ROCK ENCLOSED IN WIRE MESH

4" TO 6" MAX AT

CURBS, OTHERWISE 6"-10" DEPENDING

SEDIMENT LOADS

November 2010

ROCK SOCK PLAN

GRADATION TABLE

MATCHES SPECIFICATIONS FOR NO. 4 COARSE AGGREGATE FOR CONCRETE

PER AASHTO M43. ALL ROCK SHALL BE FRACTURED FACE, ALL SIDES.

MASS PERCENT PASSING SQUARE MESH SIEVES

ANY GAP AT JOINT SHALL BE FILLED WITH AN ADEQUATE AMOUNT OF 11/2" (MINUS) CRUSHED ROCK AND WRAPPED WITH ADDITIONAL WIRE MESH SECURED TO ENDS OF ROCK REINFORCED SOCK. AS AN ALTERNATIVE TO FILLING JOINTS BETWEEN ADJOINING ROCK SOCKS WITH CRUSHED ROCK AND

OVERLAPPED (TYPICALLY 12-INCH OVERLAP) TO AVOID GAPS.

ADDITIONAL WIRE WRAPPING, ROCK SOCKS CAN BE

SIEVE SIZE

WIRE TIE ENDS -

- GROUND SURFACE

O" ON BEDROCK OR L HARD SURFACE, 2"

IN SOIL

ROCK SOCK SECTION

ROCK SOCK JOINTING

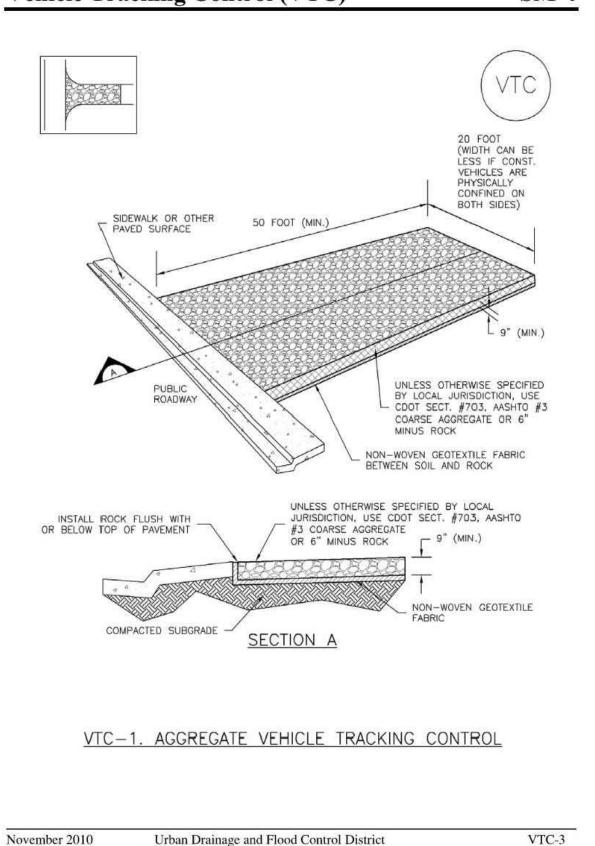
ROCK SOCK INSTALLATION NOTES

-LOCATION(S) OF ROCK SOCKS.

1. SEE PLAN VIEW FOR:

JOB NO.: DCS22-4022 PA / PM: J. MANN I. CRAWFORD DRAWN BY: 6/13/2023

Vehicle Tracking Control (VTC) SM-4



SC-5 Rock Sock (RS)

Urban Storm Drainage Criteria Manual Volume 3

ROCK SOCK 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 SOCKS SHALL BE REPLACED IF THEY BECOME HEAVILY SOILED, OR DAMAGED

5. SEDIMENT ACCUMULATED UPSTREAM OF ROCK SOCKS SHALL BE REMOVED AS NEEDED TO MAINTAIN FUNCTIONALITY OF THE BMP, TYPICALLY WHEN DEPTH OF ACCUMULATED SEDIMENTS IS APPROXIMATELY & OF THE HEIGHT OF THE ROCK SOCK.

6. ROCK SOCKS ARE TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND APPROVED BY THE LOCAL JURISDICTION.

7. WHEN ROCK SOCKS ARE REMOVED, ALL DISTURBED AREAS SHALL BE COVERED WITH TOPSOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED AS APPROVED BY LOCAL JURISDICTION.

(DETAIL ADAPTED FROM TOWN OF PARKER, COLORADO AND CITY OF AURORA, COLORADO, NOT AVAILABLE IN AUTOCAD) NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN

NOTE: THE DETAILS INCLUDED WITH THIS FACT SHEET SHOW COMMONLY USED, CONVENTIONAL METHODS OF ROCK SOCK INSTALLATION IN THE DENVER METROPOLITAN AREA. THERE ARE MANY OTHER SIMILAR PROPRIETARY PRODUCTS ON THE MARKET. UDFCD NEITHER NDORSES NOR DISCOURAGES USE OF PROPRIETARY PROTECTION PRODUCTS; HOWEVER, IN THE EVENT PROPRIETARY METHODS ARE USED, THE APPROPRIATE DETAIL FROM THE MANUFACTURER MUST BE INCLUDED IN THE SWMP AND THE BMP MUST BE INSTALLED AND MAINTAINED AS SHOWN IN THE MANUFACTURER'S DETAILS.

November 2010 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 **SM-4 Vehicle Tracking Control (VTC)**

STABILIZED CONSTRUCTION ENTRANCE/EXIT INSTALLATION NOTES

 SEE PLAN VIEW FOR
 -LOCATION OF CONSTRUCTION ENTRANCE(S)/EXIT(S).
 -TYPE OF CONSTRUCTION ENTRANCE(S)/EXITS(S) (WITH/WITHOUT WHEEL WASH, CONSTRUCTION MAT OR TRM).

2. CONSTRUCTION MAT OR TRM STABILIZED CONSTRUCTION ENTRANCES ARE ONLY TO BE USED ON SHORT DURATION PROJECTS (TYPICALLY RANGING FROM A WEEK TO A MONTH) WHERE THERE WILL BE LIMITED VEHICULAR ACCESS

3. A STABILIZED CONSTRUCTION ENTRANCE/EXIT SHALL BE LOCATED AT ALL ACCESS POINTS WHERE VEHICLES ACCESS THE CONSTRUCTION SITE FROM PAVED RIGHT-OF-WAYS. 4. STABILIZED CONSTRUCTION ENTRANCE/EXIT SHALL BE INSTALLED PRIOR TO ANY LAND

5. A NON-WOVEN GEOTEXTILE FABRIC SHALL BE PLACED UNDER THE STABILIZED CONSTRUCTION ENTRANCE/EXIT PRIOR TO THE PLACEMENT OF ROCK.

6. UNLESS OTHERWISE SPECIFIED BY LOCAL JURISDICTION, ROCK SHALL CONSIST OF DOT SECT. #703, AASHTO #3 COARSE AGGREGATE OR 6" (MINUS) ROCK.

STABILIZED CONSTRUCTION ENTRANCE/EXIT MAINTENANCE NOTES

DISTURBING ACTIVITIES.

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 TO THE STABILIZED ENTRANCE/EXIT TO MAINTAIN A CONSISTENT DEPTH.

5. SEDIMENT TRACKED ONTO PAVED ROADS IS TO BE REMOVED THROUGHOUT THE DAY AND THE END OF THE DAY BY SHOVELING OR SWEEPING. SEDIMENT MAY NOT BE WASHED DOWN STORM SEWER DRAINS.

NOTE; MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

(DETAILS ADAPTED FROM CITY OF BROOMFIELD, COLORADO, NOT AVAILABLE IN AUTOCAD)

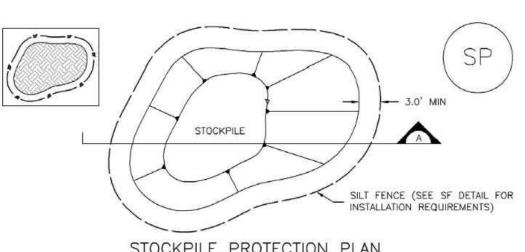
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VTC-6

November 2010

Stockpile Management (SP)

MM-2



STOCKPILE PROTECTION PLAN SILT FENCE (SEE SF DETAIL FOR INSTALLATION REQUIREMENTS)

STOCKPILE PROTECTION INSTALLATION NOTES

SILT FENCE IS SHOWN IN THE STOCKPILE PROTECTION DETAILS; HOWEVER, OTHER TYPES OF PERIMETER CONTROLS INCLUDING SEDIMENT CONTROL LOGS OR ROCK SOCKS MAY BE SUITABLE IN SOME CIRCUMSTANCES. CONSIDERATIONS FOR DETERMINING THE APPROPRIATE TYPE OF PERIMETER CONTROL FOR A STOCKPILE INCLUDE WHETHER THE STOCKPILE IS LOCATED ON A PERVIOUS OR IMPERVIOUS SURFACE, THE RELATIVE HEIGHTS OF THE PERIMETER CONTROL AND STOCKPILE, THE ABILITY OF THE PERIMETER CONTROL TO CONTAIN THE STOCKPILE WITHOUT FAILING IN THE EVENT THAT MATERIAL FROM THE STOCKPILE SHIFTS OR SLUMPS AGAINST THE PERIMETER, AND OTHER FACTORS.

MULCHING, EROSION CONTROL BLANKETS, OR SOIL BINDERS, SOILS STOCKPILED FOR AN EXTENDED PERIOD (TYPICALLY FOR MORE THAN 60 DAYS) SHOULD BE SEEDED AND MULCHED WITH A TEMPORARY GRASS COVER ONCE THE STOCKPILE IS PLACED (TYPICALLY WITHIN 14 DAYS), USE OF MULCH ONLY OR A SOIL BINDER IS ACCEPTABLE IF THE STOCKPILE WILL BE IN PLACE FOR A MORE LIMITED TIME PERIOD (TYPICALLY 30-60 DAYS).

PERIMETER CONTROLS MAY NOT BE REQUIRED.

November 2010

Stockpile Management (SM) MM-2

Urban Drainage and Flood Control District

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2. CRUSHED ROCK SHALL BE 11/2" (MINUS) IN SIZE WITH A FRACTURED FACE (ALL SIDES)

4. WIRE MESH SHALL BE SECURED USING "HOG RINGS" OR WIRE TIES AT 6" CENTERS

RS-1. ROCK SOCK PERIMETER CONTROL

3. WIRE MESH SHALL BE FABRICATED OF 10 GAGE POULTRY MESH, OR EQUIVALENT, WITH A

5. SOME MUNICIPALITIES MAY ALLOW THE USE OF FILTER FABRIC AS AN ALTERNATIVE TO WIRE MESH FOR THE ROCK ENCLOSURE.

AND SHALL COMPLY WITH GRADATION SHOWN ON THIS SHEET (11/2" MINUS).

MAXIMUM OPENING OF 1/2", RECOMMENDED MINIMUM ROLL WIDTH OF 48"

ALONG ALL JOINTS AND AT 2" CENTERS ON ENDS OF SOCKS.

STOCKPILE PROTECTION 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.

STOCKPILE PROTECTION MAINTENANCE NOTES

4. IF PERIMETER PROTECTION MUST BE MOVED TO ACCESS SOIL STOCKPILE, REPLACE PERIMETER CONTROLS BY THE END OF THE WORKDAY.

5. STOCKPILE PERIMETER CONTROLS CAN BE REMOVED ONCE ALL THE MATERIAL FROM THE

(DETAILS ADAPTED FROM PARKER, COLORADO, NOT AVAILABLE IN AUTOCAD)

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

SC-5

Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 November 2010

Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3

SP-1. STOCKPILE PROTECTION

2. INSTALL PERIMETER CONTROLS IN ACCORDANCE WITH THEIR RESPECTIVE DESIGN DETAILS.

3. STABILIZE THE STOCKPILE SURFACE WITH SURFACE ROUGHENING, TEMPORARY SEEDING AND

4. FOR TEMPORARY STOCKPILES ON THE INTERIOR PORTION OF A CONSTRUCTION SITE, WHERE OTHER DOWNGRADIENT CONTROLS, INCLUDING PERIMETER CONTROL, ARE IN PLACE, STOCKPILE

 SEE PLAN VIEW FOR:

 LOCATION OF STOCKPILES.

 -TYPE OF STOCKPILE PROTECTION.

Temporary Outlet Protection (TOP)

KEY IN TO 2 x D50

AROUND PERIMETER

RIPRAP D50 DIAMETER

(INCHES)

EXTEND RIPRAP TO HEIGHT OF

CULVERT OR NORMAL CHANNEL DEPTH, WHICHEVER IS LESS

TEMPORARY OUTLET PROTECTION PLAN

SECTION A

TABLE OP-1. TEMPORARY OUTLET PROTECTION

SIZING TABLE

OP-1. TEMPORARY OUTLET PROTECTION

Urban Drainage and Flood Control District

Temporary and Permanent Seeding (TS/PS)

Warm

Urban Storm Drainage Criteria Manual Volume 3

Table TS/PS-2. Seeding Dates for Annual and Perennial Grasses

Annual Grasses

(Numbers in table reference species in Table TS/PS-1)

Cool

1,2,3

6, 7, 8, 9

Warm

V

APRON

LENGTH, La

(FT)

NON-WOVEN

DIAMETER, DISCHARGE,

(INCHES)

12

Q (CFS)

JEN_

 $\check{\Box}$

CONS.

November 2010

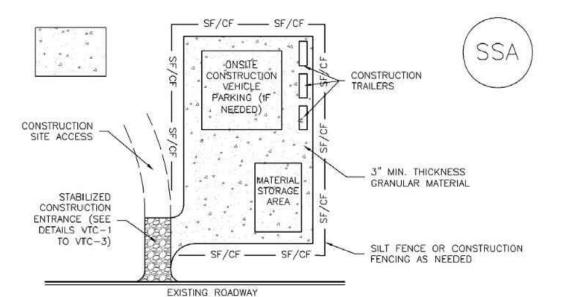
Cool

/

JOB NO.: DCS22-4022 PA / PM: J. MANN DRAWN BY: I. CRAWFORD

6/13/2023

Stabilized Staging Area (SSA)



SSA-1. STABILIZED STAGING AREA

STABILIZED STAGING AREA INSTALLATION NOTES

-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

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

Temporary Outlet Protection (TOP)

TEMPORARY OUTLET PROTECTION INSTALLATION NOTES

EROSION, AND PERFORM NECESSARY MAINTENANCE.

SEE PLAN VIEW FOR
 -LOCATION OF OUTLET PROTECTION.
 -DIMENSIONS OF OUTLET PROTECTION.

LESS THAN 2 YEARS.

DOCUMENTED THOROUGHLY.

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

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.

November 2010

Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3

2. DETAIL IS INTENDED FOR PIPES WITH SLOPE \leq 10%. ADDITIONAL EVALUATION OF RIPRAP SIZING AND OUTLET PROTECTION DIMENSIONS REQUIRED FOR STEEPER SLOPES.

3. TEMPORARY OUTLET PROTECTION INFORMATION IS FOR OUTLETS INTENDED TO BE UTILIZED

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

2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE

3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON

(DETAILS ADAPTED FROM AURORA, COLORADO AND PREVIOUS VERSION OF VOLUME 3, NOT AVAILABLE IN AUTOCAD)

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

TEMPORARY OUTLET PROTECTION INSPECTION AND MAINTENANCE NOTES

EC-8

SM-6

Table TS/PS-1. Minimum Drill Seeding Rates for Various Temporary Annual Grasses

Species ^a (Common name)	Growth Season ^b	Pounds of Pure Live Seed (PLS)/acre ^c	Planting Depth (inches)
1. Oats	Cool	35 - 50	1 - 2
2. Spring wheat	Cool	25 - 35	1 - 2
3. Spring barley	Cool	25 - 35	1 - 2
4. Annual ryegrass	Cool	10 - 15	1/2
5. Millet	Warm	3 - 15	1/2 - 3/4
6. Winter wheat	Cool	20-35	1 - 2
7. Winter barley	Cool	20-35	1 - 2
8. Winter rye	Cool	20-35	1 - 2
9. Triticale	Cool	25-40	1 - 2

See Table TS/PS-2 for seeding dates. Irrigation, if consistently applied, may extend the use of cool season species during the summer months.

Temporary and Permanent Seeding (TS/PS)

Urban Drainage and Flood Control District

Urban Storm Drainage Criteria Manual Volume 3

Successful seeding of annual grass resulting in adequate plant growth will usually produce enough dead-plant residue to provide protection from wind and water erosion for an additional year. This assumes that the cover is not disturbed or mowed closer than 8 inches.

Hydraulic seeding may be substituted for drilling only where slopes are steeper than 3:1 or where access limitations exist. When hydraulic seeding is used, hydraulic mulching should be applied as a separate operation, when practical, to prevent the seeds from being encapsulated in the mulch.

Seeding rates should be doubled if seed is broadcast, or increased by 50 percent if done using a Brillion Drill or by hydraulic seeding.

TOP-3

January 2021

November 2010

Stabilized Staging Area (SSA)

SM-6

SSA-4

TS/PS-4

STABILIZED STAGING AREA MAINTENANCE NOTES

STORAGE, AND UNLOADING/LOADING OPERATIONS.

5. STABILIZED STAGING AREA SHALL BE ENLARGED IF NECESSARY TO CONTAIN PARKING,

OTHERWISE STABILIZED IN A MANNER APPROVED BY LOCAL JURISDICTION.

(DETAILS ADAPTED FROM DOUGLAS COUNTY, COLORADO, NOT AVAILABLE IN AUTOCAD)

6. THE STABILIZED STAGING AREA SHALL BE REMOVED AT THE END OF CONSTRUCTION. THE GRANULAR MATERIAL SHALL BE REMOVED OR, IF APPROVED BY THE LOCAL JURISDICTION, USED ON SITE, AND THE AREA COVERED WITH TOPSOIL, SEEDED AND MULCHED OR

NOTE: MANY MUNICIPALITIES PROHIBIT THE USE OF RECYCLED CONCRETE AS GRANULAR MATERIAL FOR STABILIZED STAGING AREAS DUE TO DIFFICULTIES WITH RE-ESTABLISHMENT OF VEGETATION IN AREAS WHERE RECYCLED CONCRETE WAS PLACED.

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

TOP-2

Seeding Dates

January 1-March 15

March 16-April 30

May 1-May 15

May 16-June 30

July 16-August 31

September 1–September 30

October 1-December 31

July 1-July 15

Mulch

EC-8

Cover seeded areas with mulch or an appropriate rolled erosion control product to promote establishment of vegetation. Anchor mulch by crimping, netting or use of a non-toxic tackifier. See the USDCM Volume 2 Revegetation Chapter and Volume 3 Mulching BMP Fact Sheet (EC-04) for additional

Maintenance and Removal

Monitor and observe seeded areas to identify areas of poor growth or areas that fail to germinate. Reseed and mulch these areas, as needed.

If a temporary annual seed was planted, the area should be reseeded with the desired perennial mix when there will be no further work in the area. To minimize competition between annual and perennial species, the annual mix needs time to mature and die before seeding the perennial mix. To increase success of the perennial mix, it should be seeded during the appropriate seeding dates the second year after the temporary annual mix was seeded. Alternatively, if this timeline is not feasible, the annual mix seed heads should be removed and then the area seeded with the perennial mix.

An area that has been permanently seeded should have a good stand of vegetation within one growing season if irrigated and within three growing seasons without irrigation in Colorado. Reseed portions of the site that fail to germinate or remain bare after the first growing season.

Seeded areas may require irrigation, particularly during extended dry periods. Targeted weed control may also be necessary.

Protect seeded areas from construction equipment and vehicle access.

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TS/PS-5

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Rolled Erosion Control Products (RECP)

EC-6

EROSION CONTROL BLANKET INSTALLATION NOTES

-TYPE OF ECB (STRAW, STRAW-COCONUT, COCONUT, OR EXCELSIOR).
-AREA, A, IN SQUARE YARDS OF EACH TYPE OF ECB.

2. 100% NATURAL AND BIODEGRADABLE MATERIALS ARE PREFERRED FOR RECPS, ALTHOUGH SOME JURISDICTIONS MAY ALLOW OTHER MATERIALS IN SOME APPLICATIONS.

3. IN AREAS WHERE ECBS 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 ECB INSTALLATION AND THE ECB SHALL BE IN FULL CONTACT WITH SUBGRADE. NO GAPS OR VOIDS SHALL EXIST UNDER THE

4. PERIMETER ANCHOR TRENCH SHALL BE USED ALONG THE OUTSIDE PERIMETER OF ALL

6. INTERMEDIATE ANCHOR TRENCH SHALL BE USED AT SPACING OF ONE-HALF ROLL LENGTH FOR COCONUT AND EXCELSIOR ECBs.

7. OVERLAPPING JOINT DETAIL SHALL BE USED TO JOIN ROLLS OF ECBs TOGETHER FOR ECBs ON SLOPES.

9. ANY AREAS OF SEEDING AND MULCHING DISTURBED IN THE PROCESS OF INSTALLING ECBS

10. DETAILS ON DESIGN PLANS FOR MAJOR DRAINAGEWAY STABILIZATION WILL GOVERN IF

TABLE ECB-1. ECB MATERIAL SPECIFICATIONS

STRAW CONTENT

100%

*STRAW ECBS MAY ONLY BE USED OUTSIDE OF STREAMS AND DRAINAGE CHANNEL.
**ALTERNATE NETTING MAY BE ACCEPTABLE IN SOME JURISDICTIONS

Urban Drainage and Flood Control District

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30% MIN 70% MAX

100%

EXCELSIOR RECOMMENDED NETTING**

100%

DOUBLE/ NATURAL

DOUBLE/ NATURAL

DOUBLE/ NATURAL

5. JOINT ANCHOR TRENCH SHALL BE USED TO JOIN ROLLS OF ECBs TOGETHER (LONGITUDINALLY AND TRANSVERSELY) FOR ALL ECBs EXCEPT STRAW WHICH MAY USE AN OVERLAPPING JOINT.

8. MATERIAL SPECIFICATIONS OF ECBs SHALL CONFORM TO TABLE ECB-1.

1. SEE PLAN VIEW FOR:

BLANKET AREAS.

SHALL BE RESEEDED AND MULCHED.

DIFFERENT FROM THOSE SHOWN HERE.

STRAW*

COCONUT

COCONUT

EXCELSIOR

RECP-8

SC-1

JENT

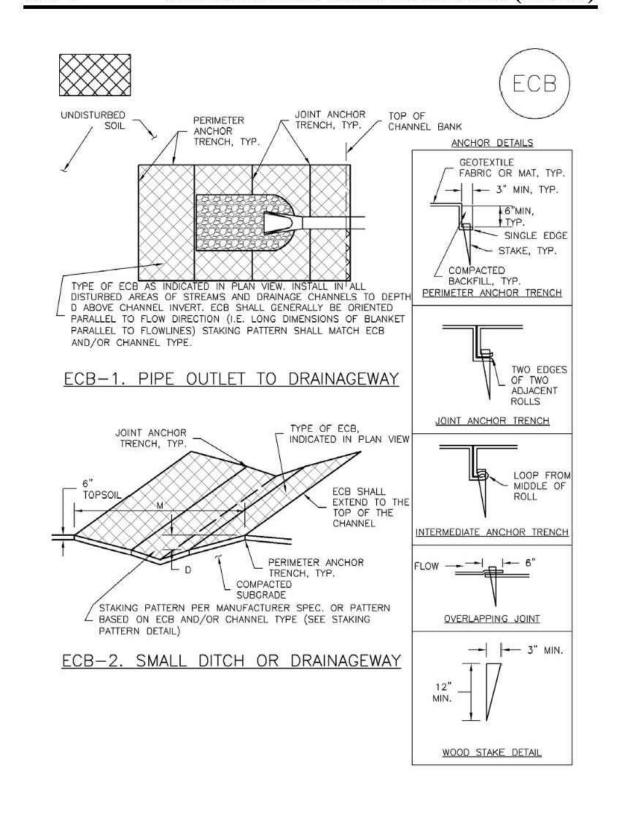
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Rolled Erosion Control Products (RECP)

EC-6

RECP-6



Rolled Erosion Control Products (RECP) EC-6 STAGGER OVERLAPS - OVERLAPPING JOINT STAKING PATTERN PER MANUFACTURER SPEC. OR PATTERN BASED ON ECB AND/OR SLOPE TYPE (SEE STAKING PATTERN DETAIL) PERIMETER ANCHOR ECB-3. OUTSIDE OF DRAINAGEWAY PERIMETER ANCHOR STAKING PATTERNS BY ECB TYPE 2:1 AND STEEPER LOW FLOW CHANNEL HIGH FLOW CHANNEL STAKING PATTERNS BY SLOPE OR CHANNEL TYPE Urban Drainage and Flood Control District RECP-7 November 2010

Rolled Erosion Control Products (RECP)

November 2010

Urban Drainage and Flood Control District

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EROSION CONTROL BLANKET 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

3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON

4. ECBs SHALL BE LEFT IN PLACE TO EVENTUALLY BIODEGRADE, UNLESS REQUESTED TO BE

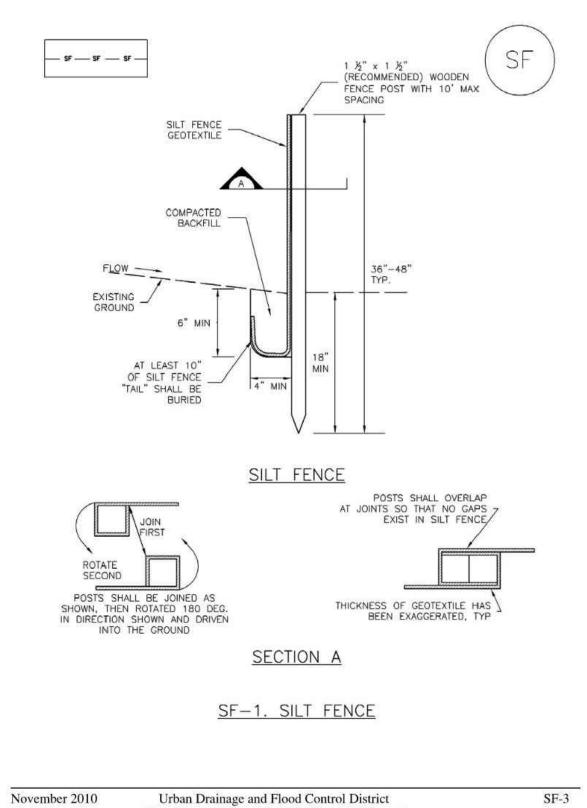
5. ANY ECB PULLED OUT, TORN, OR OTHERWISE DAMAGED SHALL BE REPAIRED OR REINSTALLED. ANY SUBGRADE AREAS BELOW THE GEOTEXTILE THAT HAVE ERODED TO CREATED A VOID UNDER THE BLANKET, OR THAT REMAIN DEVOID OF GRASS SHALL BE REPAIRED, RESEEDED AND MULCHED AND THE ECB REINSTALLED.

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN

(DETAILS ADAPTED FROM DOUGLAS COUNTY, COLORADO AND TOWN OF PARKER COLORADO, NOT AVAILABLE IN AUTOCAD)

SC-1

Urban Storm Drainage Criteria Manual Volume 3



Silt Fence (SF)

Silt Fence (SF)

November 2010

SILT FENCE INSTALLATION NOTES

1. SILT FENCE MUST BE PLACED AWAY FROM THE TOE OF THE SLOPE TO ALLOW FOR WATER PONDING. SILT FENCE AT THE TOE OF A SLOPE SHOULD BE INSTALLED IN A FLAT LOCATION AT LEAST SEVERAL FEET (2-5 FT) FROM THE TOE OF THE SLOPE TO ALLOW ROOM FOR

2. A UNIFORM 6" X 4" ANCHOR TRENCH SHALL BE EXCAVATED USING TRENCHER OR SILT FENCE INSTALLATION DEVICE, NO ROAD GRADERS, BACKHOES, OR SIMILAR EQUIPMENT SHALL

3. COMPACT ANCHOR TRENCH BY HAND WITH A "JUMPING JACK" OR BY WHEEL ROLLING. COMPACTION SHALL BE SUCH THAT SILT FENCE RESISTS BEING PULLED OUT OF ANCHOR

4. SILT FENCE SHALL BE PULLED TIGHT AS IT IS ANCHORED TO THE STAKES, THERE SHOULD BE NO NOTICEABLE SAG BETWEEN STAKES AFTER IT HAS BEEN ANCHORED TO THE STAKES. 5. SILT FENCE FABRIC SHALL BE ANCHORED TO THE STAKES USING 1" HEAVY DUTY STAPLES OR NAILS WITH 1" HEADS, STAPLES AND NAILS SHOULD BE PLACED 3" ALONG THE FABRIC

6. AT THE END OF A RUN OF SILT FENCE ALONG A CONTOUR, THE SILT FENCE SHOULD BE TURNED PERPENDICULAR TO THE CONTOUR TO CREATE A "J-HOOK." THE "J-HOOK" EXTENDING PERPENDICULAR TO THE CONTOUR SHOULD BE OF SUFFICIENT LENGTH TO KEEP RUNOFF FROM FLOWING AROUND THE END OF THE SILT FENCE (TYPICALLY 10' - 20').

7. SILT FENCE SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES.

SILT FENCE 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. SEDIMENT ACCUMULATED UPSTREAM OF THE SILT FENCE SHALL BE REMOVED AS NEEDED TO MAINTAIN THE FUNCTIONALITY OF THE BMP, TYPICALLY WHEN DEPTH OF ACCUMULATED

5. REPAIR OR REPLACE SILT FENCE WHEN THERE ARE SIGNS OF WEAR, SUCH AS SAGGING, TEARING, OR COLLAPSE.

6. SILT FENCE IS TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND APPROVED BY THE LOCAL JURISDICTION, OR IS REPLACED BY AN EQUIVALENT PERIMETER

7. WHEN SILT FENCE IS REMOVED, ALL DISTURBED AREAS SHALL BE COVERED WITH TOPSOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED AS APPROVED BY LOCAL JURISDICTION.

(DETAIL ADAPTED FROM TOWN OF PARKER, COLORADO AND CITY OF AURORA, NOT AVAILABLE IN AUTOCAD) NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

SF-4 Urban Drainage and Flood Control District

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RECP-9

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SC-7

SB-7

Sediment Basin (SB)

SEDIMENT BASIN MAINTENANCE NOTES

BELOW THE SPILLWAY CREST).

DIFFERENCES ARE NOTED.

August 2013

(DETAILS ADAPTED FROM DOUGLAS COUNTY, COLORADO)

EROSION, AND PERFORM NECESSARY MAINTENANCE.

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

2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.

4. SEDIMENT ACCUMULATED IN BASIN SHALL BE REMOVED AS NEEDED TO MAINTAIN BMP EFFECTIVENESS, TYPICALLY WHEN SEDIMENT DEPTH REACHES ONE FOOT (I.E., TWO FEET

5. SEDIMENT BASINS ARE TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND GRASS COVER IS ACCEPTED BY THE LOCAL JURISDICTION.

WHEN SEDIMENT BASINS ARE REMOVED, ALL DISTURBED AREAS SHALL BE COVERED WITH TOPSOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED AS APPROVED BY LOCAL JURISDICTION.

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NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN

3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.

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SC-7 **Sediment Basin (SB)**

> TABLE SB-1. SIZING INFORMATION FOR STANDARD SEDIMENT BASIN Upstream Drainage Basin Bottom Width Spillway Crest Area (rounded to (W), (ft) Length (CL), (ft) nearest acre), (ac) 38 1/2 47 1/4 58 1/4

SEDIMENT BASIN INSTALLATION NOTES

SEE PLAN VIEW FOR:
 -LOCATION OF SEDIMENT BASIN.

-TYPE OF BASIN (STANDARD BASIN OR NONSTANDARD BASIN).
-FOR STANDARD BASIN, BOTTOM WIDTH W, CREST LENGTH CL, AND HOLE DIAMETER, HD. -FOR NONSTANDARD BASIN, SEE CONSTRUCTION DRAWINGS FOR DESIGN OF BASIN INCLUDING RISER HEIGHT H, NUMBER OF COLUMNS N, HOLE DIAMETER HD AND PIPE DIAMETER D.

4. EMBANKMENT MATERIAL SHALL CONSIST OF SOIL FREE OF DEBRIS, ORGANIC MATERIAL, AND ROCKS OR CONCRETE GREATER THAN 3 INCHES AND SHALL HAVE A MINIMUM OF 15 PERCENT BY WEIGHT PASSING THE NO. 200 SIEVE.

5. EMBANKMENT MATERIAL SHALL BE COMPACTED TO AT LEAST 95 PERCENT OF MAXIMUM DENSITY IN ACCORDANCE WITH ASTM D698.

6. PIPE SCH 40 OR GREATER SHALL BE USED.

7. THE DETAILS SHOWN ON THESE SHEETS PERTAIN TO STANDARD SEDIMENT BASIN(S) FOR DRAINAGE AREAS LESS THAN 15 ACRES. SEE CONSTRUCTION DRAWINGS FOR EMBANKMENT, STORAGE VOLUME, SPILLWAY, OUTLET, AND OUTLET PROTECTION DETAILS FOR ANY SEDIMENT BASIN(S) THAT HAVE BEEN INDIVIDUALLY DESIGNED FOR DRAINAGE AREAS LARGER THAN 15 ACRES.

SB-6

Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION.

2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE

3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON

INSTALLATION, MAINTENANCE, AND/OR REMOVAL OF THE FENCE SHALL BE COVERED WITH TOPSOIL, SEEDED AND MULCHED, OR OTHERWISE STABILIZED AS APPROVED BY LOCAL

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN

(DETAIL ADAPTED FROM TOWN OF PARKER, COLORADO, NOT AVAILABLE IN AUTOCAD)

Construction Fence (CF)

CONSTRUCTION FENCE MAINTENANCE NOTES

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.

5. WHEN CONSTRUCTION FENCES ARE REMOVED, ALL DISTURBED AREAS ASSOCIATED WITH THE

DIFFERENCES ARE NOTED.

November 2010

4. CONSTRUCTION FENCE SHALL BE REPAIRED OR REPLACED WHEN THERE ARE SIGNS OF DAMAGE SUCH AS RIPS OR SAGS. CONSTRUCTION FENCE IS TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND APPROVED BY THE LOCAL JURISDICTION.

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Construction Fence (CF)

Urban Drainage and Flood Control District

Urban Storm Drainage Criteria Manual Volume 3

Sediment Basin (SB)

DIAMETER,

SCHEDULE 40 PVC OR GREATER

L EXCAVATION

EMBANKMENT

August 2013

SM-3

MATERIAL

INLETS TO SEDIMENT BASIN SHALL ENTER AT FURTHEST

DISTANCE TO OUTLET AND SHALL CONSIST OF A TEMPORARY SLOPE

SEDIMENT BASIN PLAN

*EXCEPT WHERE THE HOLES EXCEED 1"

RIPRAP BEDDING -

CREST LENGTH

EL. 03.00 AT CREST

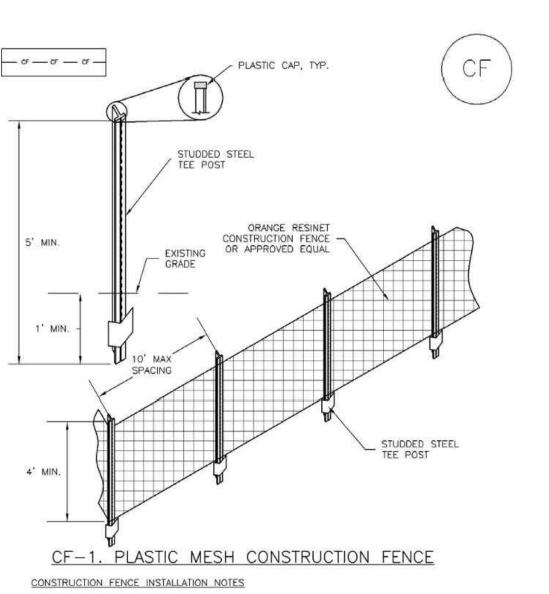
∠ D50=9" RIPRAP TYPE L

DIAMETER, THEN UP TO TWO COLUMNS OF SAME SIZED HOLES MAY BE USED

D50=9" RIPRAP

TYPE L. (SEE TABLE MD-7, MAJOR

DRAINAGE, VOL. 1)



SEE PLAN VIEW FOR:

 LOCATION OF CONSTRUCTION FENCE.

2. CONSTRUCTION FENCE SHOWN SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES.

3. CONSTRUCTION FENCE SHALL BE COMPOSED OF ORANGE, CONTRACTOR—GRADE MATERIAL THAT IS AT LEAST 4' HIGH. METAL POSTS SHOULD HAVE A PLASTIC CAP FOR SAFETY. 4. STUDDED STEEL TEE POSTS SHALL BE UTILIZED TO SUPPORT THE CONSTRUCTION FENCE. MAXIMUM SPACING FOR STEEL TEE POSTS SHALL BE 10'.

5. CONSTRUCTION FENCE SHALL BE SECURELY FASTENED TO THE TOP, MIDDLE, AND BOTTOM OF EACH POST.

CF-2 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 November 2010

SC-7

CRUSHED ROCK

CF-3

2. FOR STANDARD BASIN, BOTTOM DIMENSION MAY BE MODIFIED AS LONG AS BOTTOM AREA IS NOT REDUCED.

3. SEDIMENT BASINS SHALL BE INSTALLED PRIOR TO ANY OTHER LAND-DISTURBING ACTIVITY THAT RELIES ON ON BASINS AS AS A STORMWATER CONTROL.

August 2013

SM-3

WARE

FOR AND ON BEHALF OF WARE MALCOMB

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5.00' CURBED MEDIAN

✓ 4" SOLID DOUBLE

YELLOW LINE

24" X 30"

CROSSWALK

10.00' LANE

STRIPING

10.00' LANE

SET BACK

2' X 11' STOP BAR —

2' X 8' ¬

NEWPOR STREET

CROSSWALK

STRIPING

→ 4" SOLID YELLOW LINE

/ MUTCD R2-1-20 SPEED LIMIT SIGN

/- MUTCD R3-7R RIGHT

30" X 30"

11.00' LANE

11.00' LANE

- 2' X 21' STOP BAR

11.00' LANE

—— 100.00' STORAGE ——

LANE MUST TURN RIGHT

____ 150.00' STORAGE __

8" SOLID WHITE LINE 4" WHITE BROKEN

4" SOLID DOUBLE

YELLOW LINE

EX. TURN ARROW LINE (10'/30')

- MUTCD R3-7R RIGHT

30" X 30"

LANE MUST TURN RIGHT

/15.00' CURBED

· LANDSCAPE

MUTCD R3-7L LEFT TURN — MUST TURN LEFT SIGN

4" WHITE BROKEN LINE (10'/30')

TURN ARROWS

100' STORAGE -

8" SOLID WHITE LINE —

2' X 20' STOP BAR —

4" SOLID DOUBLE -YELLOW LINE

8" SOLID WHITE LINE -

TURN ARROWS -

- 200.00' STORAGE -

EX. TURN ARROW

11.00' LANE

2' X 11' STOP BAR —

– 2' X 34.5' STOP BAR 🚄

- TURN ARROW

YELLOW LINE 4" WHITE BROKEN LINE (10'/30')

8" SOLID WHITE LINE -11.00' LANE

------ 100.00' TAPER -

4" DOUBLE YELLOW -

TAPER

4" SOLID —

DOUBLE

E 136TH AVE

(MINOR ARTERIAL-ROW: VARIES)

10.00' LANE -

SET BACK

10.00' LANE -

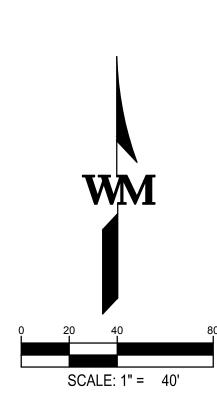
30" X 30"

CURB / GUTTER BUILDING SIDEWALK **CURB RAMPS FENCE** SIGN \bigcirc B BOLLARD PAVEMENT MARKINGS CROSSWALK STRIPING * * * TREES ICC/A117.1 ACCESSIBLE ROUTE -----SAWCUT -----OVERHEAD UTILITY ——— OH ——— UTILITY POLE DOWN GUY STREET LIGHT * ----

SITE NOTES:

- 1. CONTRACTOR TO FIELD-VERIFY EXISTING CONDITIONS PRIOR TO CONSTRUCTION AND SHALL NOTIFY ENGINEER OF ANY DISCREPANCIES. ENGINEER WILL NOT BE LIABLE FOR ANY COSTS ASSOCIATED WITH CHANGES TO THE DESIGN WITHOUT PROPER NOTIFICATION.
- 2. SEE COVER SHEET FOR BENCHMARK, BASIS OF BEARINGS, AND SURVEY INFORMATION.
- B. DIMENSIONS ARE TO THE FLOWLINE/BOTTOM OF CURB AND BUILDING FACE UNLESS OTHERWISE NOTED.
- PAVEMENT THICKNESS AND DESIGN ARE PER THE GEOTECHNICAL REPORT.
- 5. ACCESSIBLE CURB RAMPS SHALL BE CONSTRUCTED WITH DETECTABLE WARNING PADS IF REQUIRED BY LOCAL CRITERIA.
- 6. CONTRACTOR SHALL REMOVE AND REPLACE CURB, GUTTER, PAVING, LANDSCAPE AND ANY OTHER ITEMS DAMAGED DURING CONSTRUCTION.
- ITEMS DAMAGED DURING CONSTRUCTION.

 7. ALL SUBGRADE TO BE PREPARED AND CONFIRMED PER THE APPROVED GEOTECHNICAL REPORT PRIOR TO THE START OF FOUNDATIONS, SLABS, PAVING, ETC.



CONTRACTOR TO FIELD VERIFY LOCATION OF ALL EXISTING UTILITES PRIOR TO CONSTRUCTION

WORK SHALL BE CONSTRUCTED TO CITY OF THORNTON STANDARDS AND SPECIFICATIONS. THIS APPROVAL IS FOR CONFORMANCE WITH THESE STANDARDS AND SPECIFICATIONS AND OTHER CITY REQUIREMENTS. THE DESIGN AND CONCEPT REMAINS THE RESPONSIBILITY OF THE PROFESSIONAL ENGINEER OR LANDSCAPE PROFESSIONAL.

STRIPING PLAN REMARKS SUBMITTAL SUBMITTAL SUBMITTAL SUBMITTAL CONSTRUCTION

FOR AND ON BEHALF

OF WARE MALCOMB

DOCUMENT

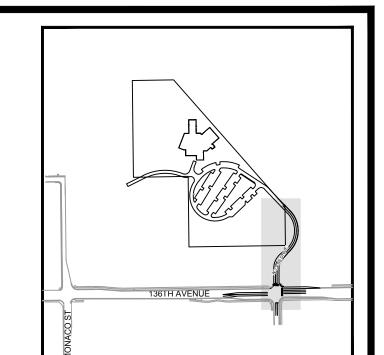
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PA / PM: J. MANN
DRAWN BY: I. CRAWFORD
DATE: 6/13/2023

SHEET

C5.1

Sheet 21 of 40



78.30' S41°43'50"W

75.14'

LINE TABLE

LINE # | BEARING | DISTANCE

S00°00'00"E

CURVE TABLE							
JRVE#	DELTA	RADIUS	LENGTH	CHORD DIRECTION	CHORD LENGTH		
C2	41°43'50"	169.80'	123.67'	S20°51'55"W	120.96'		
C4	85°18'43"	135.00'	201.01'	S00°55'31"E	182.95'		

GRADING NOTES:

CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES WITH THE ELEVATIONS SHOWN ON THE PLANS. ENGINEER WILL NOT BE LIABLE FOR AN

- WITHOUT PROPER NOTIFICATION. 2. SEE COVER SHEET FOR BENCHMARK, BASIS OF
- BEARING AND SURVEY INFORMATION.
- ARCHITECTURAL FLOOR ELEVATIONS.
- 5. CURB ELEVATIONS ARE AT FLOWLINE/BOTTOM OF CURB UNLESS OTHERWISE NOTED.
- 6. EXISTING UTILITY STRUCTURES TO BE ADJUSTED AS NECESSARY FOR PROPOSED GRADING.
- 7. SIDEWALKS AND LANDINGS SHALL BE 2.00% MAX
- 8. CROSS-SLOPE FOR WALK THROUGH CURB CUT
- SHALL NOT EXCEED 2.00% MAX ANYWHERE.
- 9. REFER TO GEOTECHNICAL REPORT FOR
- 10. GRADING OF LANDSCAPED AREAS AROUND BUILDING TO COMPLY WITH GEOTECHNICAL REPORT.

5210

5205

5200

5195

5190

9+50

9+00

PROPOSED STREET LIGHT

SCALE: 1" = 50'

CONTRACTOR TO FIELD VERIFY LOCATION OF ALL EXISTING UTILITES PRIOR TO CONSTRUCTION

WORK SHALL BE CONSTRUCTED TO CITY OF THORNTON STANDARDS AND SPECIFICATIONS. THIS APPROVAL IS FOR CONFORMANCE WITH THESE STANDARDS AND SPECIFICATIONS AND OTHER CITY REQUIREMENTS. THE DESIGN AND CONCEPT REMAINS THE RESPONSIBILITY OF THE PROFESSIONAL ENGINEER OR LANDSCAPE PROFESSIONAL.

3. ELEVATIONS ARE PER THE SURVEY DATUM, NOT PER

- 4. ELEVATIONS ARE AT FINISHED SURFACE UNLESS
- OTHERWISE NOTED.
- FLOWLINE/BOTTOM OF CURB ELEVATIONS IN THE VICINITY OF INLETS ARE AT THE EXTENDED FLOWLINE ELEVATION AND DO NOT ACCOUNT FOR LOCAL DEPRESSIONS.
- CROSS-SLOPE TOWARD ROADS, DRIVE LANES, AND PARKING AREAS UNLESS OTHERWISE NOTED.

- GROUNDWATER ELEVATIONS.

5280.00	PROPOSED SPOT ELEVATIO
(5280.0)	EXISTING SPOT ELEVATION
<u>2.00%</u>	PROPOSED SLOPE / GRADE
2.00%	EXISTING SLOPE / GRADE
HP	HIGH POINT
LP	LOW POINT
GB	GRADE BREAK
FFE	FINISHED FLOOR ELEVATION
TFI	TOP FACE OF INLET
TBC	TOP BACK OF CURB
ME	MATCH EXISTING
	FUTURE PHASE (BY OTHERS
	PROPOSED STREET LIGHT

— GRASS SWALE

WARE

FOR AND ON BEHALF

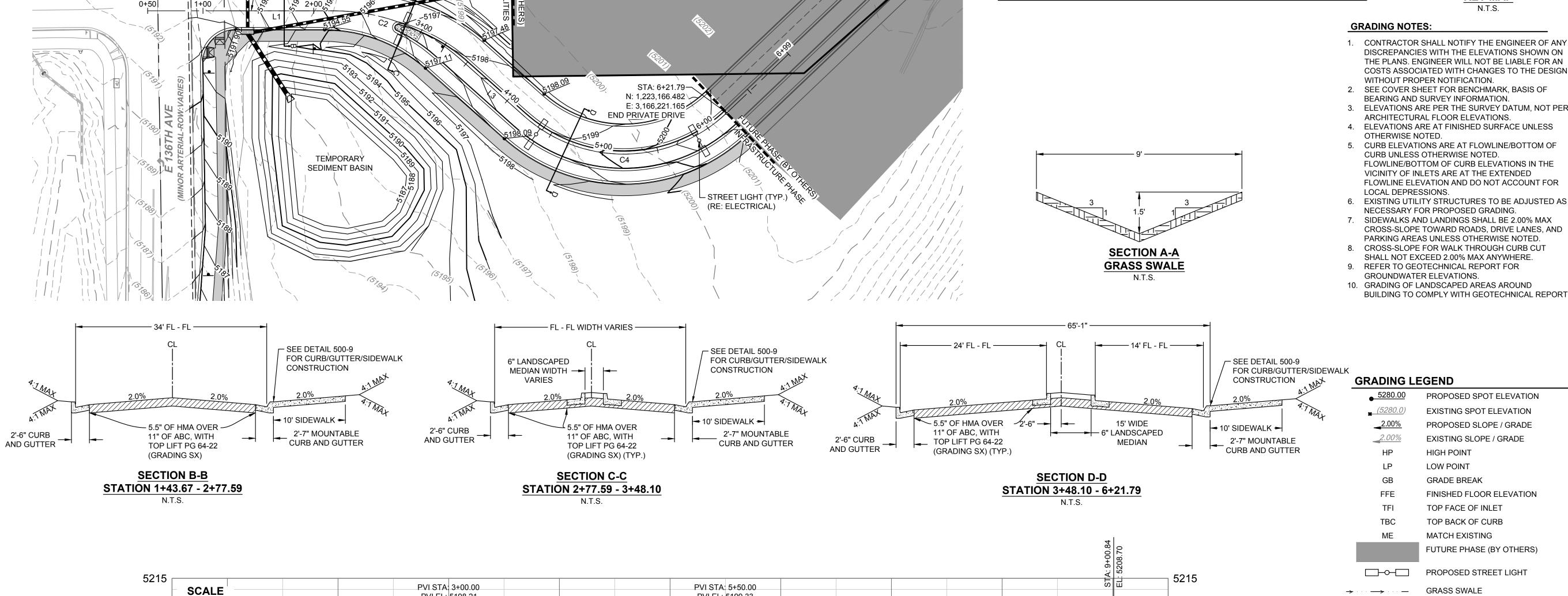
OF WARE MALCOMB

TRU

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ANYTHINK

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PVI EL: 5199.33

A.D: 2.22%

K: 123.66

LVC: 275.00

5+00

PRIVATE DRIVE

END OF PRIVATE

EL: 5201.42

6+00

DRIVE CONSTRUCTION
—STA: 6+21.79

7+00

8+00

GRASS

PVI EL: 5198.21

A.D: -3.05%

K: 73.74

LVC: 225.00

-EXISTING GRADE AT CENTERLINE

3+00

PROPOSED GRADE AT CENTERLINE

4+00

SWALE

N: 1,222,736.961

HORIZ: 1"=50'

VERT: 1"=5'

5210

5205

5200

5195

5190

0+50

1+00

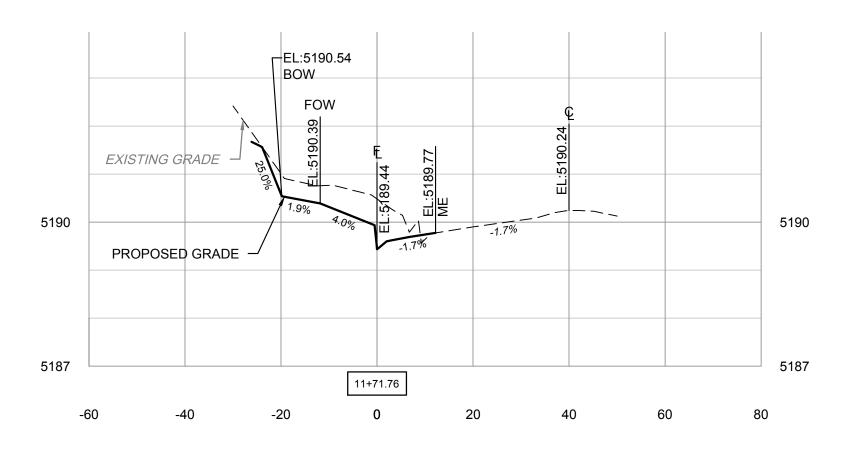
2+00

WARE

FOR AND ON BEHALF OF WARE MALCOMB

LIBRAR ANYTHINK

JOB NO.: DCS22-4022 PA / PM: J. MANN DRAWN BY: I. CRAWFORD 6/13/2023



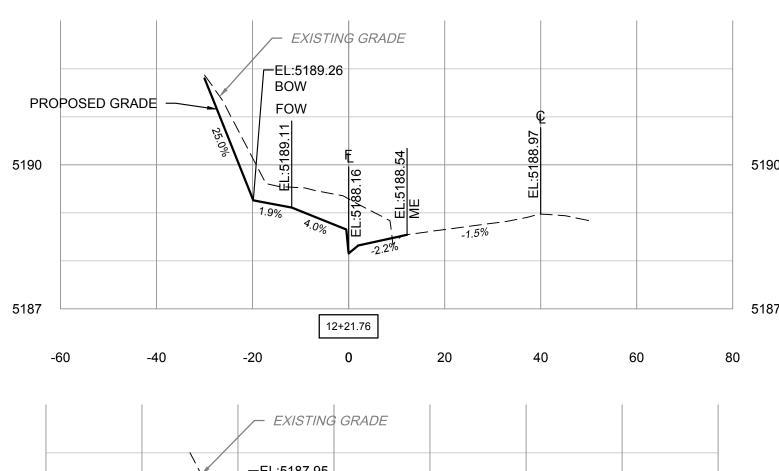
11+21.76

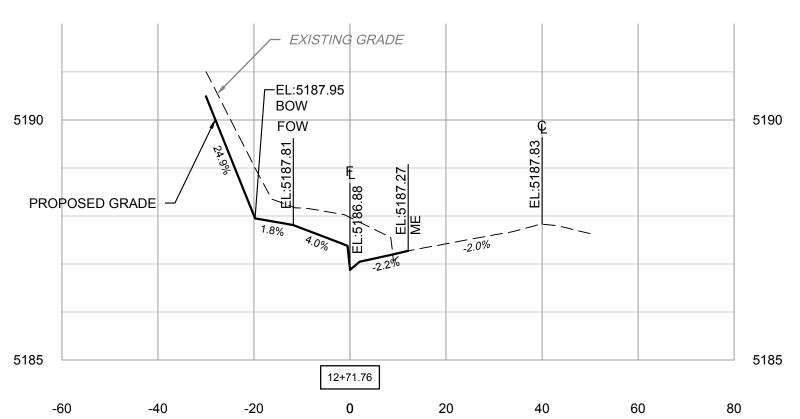
5195

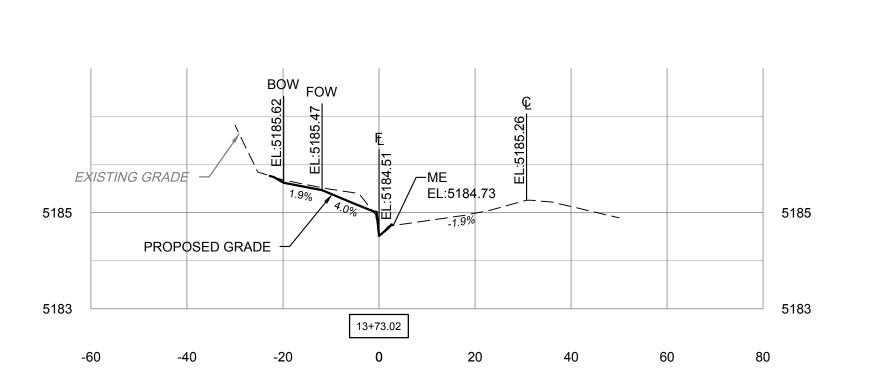
BOW

EXISTING GRADE

PROPOSED GRADE







EL:5186.71 BOW

13+21.76

EXISTING GRADE

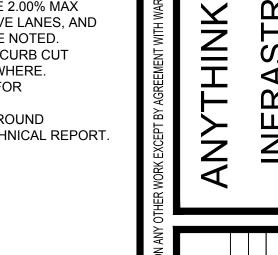
FOW

PROPOSED GRADE

5190

WM NOTES: GRADING

- 1. CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES WITH THE ELEVATIONS SHOWN ON THE PLANS. ENGINEER WILL NOT BE LIABLE FOR AN COSTS ASSOCIATED WITH CHANGES TO THE DESIGN WITHOUT PROPER NOTIFICATION.
- 2. SEE COVER SHEET FOR BENCHMARK, BASIS OF BEARING AND SURVEY INFORMATION.
- 3. ELEVATIONS ARE PER THE SURVEY DATUM, NOT PER ARCHITECTURAL FLOOR ELEVATIONS.
- 4. ELEVATIONS ARE AT FINISHED SURFACE UNLESS OTHERWISE NOTED.
- 5. CURB ELEVATIONS ARE AT FLOWLINE/BOTTOM OF CURB UNLESS OTHERWISE NOTED. FLOWLINE/BOTTOM OF CURB ELEVATIONS IN THE VICINITY OF INLETS ARE AT THE EXTENDED FLOWLINE ELEVATION AND DO NOT ACCOUNT FOR LOCAL DEPRESSIONS.
- 6. EXISTING UTILITY STRUCTURES TO BE ADJUSTED AS
- NECESSARY FOR PROPOSED GRADING. 7. SIDEWALKS AND LANDINGS SHALL BE 2.00% MAX CROSS-SLOPE TOWARD ROADS, DRIVE LANES, AND
- PARKING AREAS UNLESS OTHERWISE NOTED. 8. CROSS-SLOPE FOR WALK THROUGH CURB CUT SHALL NOT EXCEED 2.00% MAX ANYWHERE.
- 9. REFER TO GEOTECHNICAL REPORT FOR GROUNDWATER ELEVATIONS.
- 10. GRADING OF LANDSCAPED AREAS AROUND BUILDING TO COMPLY WITH GEOTECHNICAL REPORT.



136TH AVE CROSS SECTIONS	REMARKS	60% CD SUBMITTAL	90% CD SUBMITTAL	95% CD SUBMITTAL	100% CD SUBMITTAL		
136TH AV	DATE	10/07/2022	11/18/2022	04/18/2023	06/16/2023		
	ON	~	2	3	4		

JOB NO.: DCS22-4022 PA / PM: J. MANN DRAWN BY: I. CRAWFORD LOCATION OF ALL EXISTING UTILITES

WORK SHALL BE CONSTRUCTED TO CITY OF THORNTON STANDARDS AND SPECIFICATIONS. THIS APPROVAL IS FOR CONFORMANCE WITH THESE STANDARDS AND SPECIFICATIONS AND OTHER CITY REQUIREMENTS. THE DESIGN AND CONCEPT REMAINS THE RESPONSIBILITY OF THE PROFESSIONAL ENGINEER OR LANDSCAPE

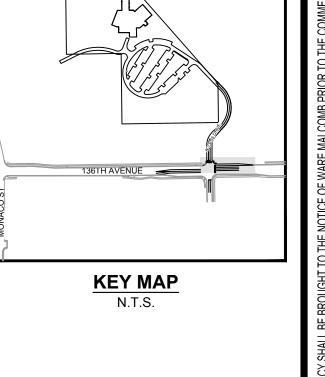
PROFESSIONAL.

SCALE: Hor: 1" = 20'

SCALE: Vert: 1" = 10

CONTRACTOR TO FIELD VERIFY

PRIOR TO CONSTRUCTION



FOR AND ON BEHALF OF WARE MALCOMB LIBRARY

WARE

OR CONSTRUCTI

6/20/2023

UTILITY NOTES

PROPOSED

------ ss ------

(VM)

H2O

LEGEND

EXISTING

N/A

——— SS ———

H H ~ 4

------ IRR ------

----- NGAS -----

EXISTING INLET -

INV. OUT: 5177.8 (S)

- STREET LIGHT

N: 1,223,141.53

E: 3,166,246.15

(RE: ELECTRICAL)

- STREET LIGHT

(RE: ELECTRICAL)

N: 1,222,994.19

(RE: ELECTRICAL) N: 1,222,873.80

E: 3,166,240.48

STREET LIGHT

E: 3,166,145.24

-24" RCP

TYPE R INLET

/-36" FES W/ TOE WALL

(THIS SHEET)

N: 1,222,698.26

E: 3,166,191.37

HYDRANT TO

- FIBER OPTIC VAULT

EXISTING -

REMAIN

∕-36" RCP

- UTILITY CROSSING (TYP.)

5' MANHOLE

— BLOW-UP DETAIL B

(SEE SHEET C7.1)

← EXISTING 8" PVC WATER

- FUTURE WATER MAIN

- EXISTING

SINCLAIR 6" HP

_4' SSMH

PETROLEUM

-wu - wu - wu - wu

FUTURE SANITARY —

SERVICE (BY OTHERS)

8" PVC

FUTURE STORM

FUTURE WATER

MAIN (BY OTHERS)

FUTURE PHASE UTILITIES (BY OTHER

INFRASTRÜCTURE PHASE UTILITIES _

24" RCP-

24" RCP-

BLOW-UP DETAIL A —

(SEE SHEET C7.1)

DRY UTILITY EQUIPMENT -

EXISTING 30" -

TYPE C INLET W/ CLOSED MESH GRATE-

DIP WATER

4' SSMH-\ | FUTURE PHASE SANITARY (BY OTHERS)

INFRASTRUCTURE PHASE SANITARY

EFO - FO E - FO

E 136TH AVE

(MINOR ARTERIAL-ROW: VARIES)

(RE: ELECTRICAL)

LINE (BY OTHERS)

FUTURE WATER MAIN (BY OTHERS

(BY OTHERS)

EXISTING -

SINCLAIR 10" HP

8" PVC

4' SSMH

EXISTING MANHOLE -

E-GATVE --

PETROLEUM

BOUNDARY **EASEMENT** CENTERLINE **CURB / GUTTER**

BUILDING

SAWCUT

STORM DRAIN

SANITARY

WATERLINE FIRE HYDRANT WATER VALVE WATER REDUCER

WATER METER WATER PLUG

WATER MANHOLE

WATER PRV

WATER VAULT

IRRIGATION

CABLE TV BURIED ELECTRIC

NATURAL GAS

TELEPHONE

FUTURE PHASE

UTILITY CROSSING

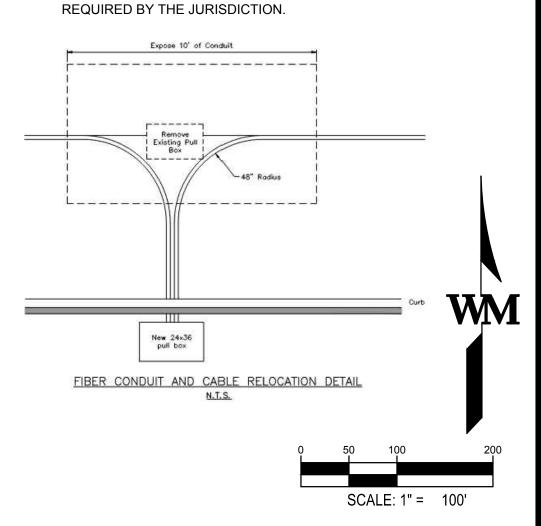
(BY OTHERS)

— UKWN — UNKNOWN UTILITY

WATER FITTINGS H H ~ ~

OVERHEAD UTILITY ——— OH ———

- 1. CONTRACTOR SHALL VERIFY THE ELEVATION OF ALL EXISTING UTILITIES WHERE NEW GRADING OR UTILITY WORK WILL OCCUR AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES OR CONFLICTS. ENGINEER WILL NOT BE LIABLE FOR ANY COSTS ASSOCIATED WITH CHANGES TO THE DESIGN WITHOUT PROPER NOTIFICATION.
- 2. SEE COVER SHEET FOR BENCHMARK, BASIS OF BEARINGS, AND SURVEY INFORMATION.
- 3. PROPOSED DRY UTILITIES ARE SHOWN FOR REFERENCE ONLY. REFER TO PLANS BY UTILITY PROVIDERS AND/OR MEP.
- 4. EXISTING UTILITY STRUCTURES TO BE ADJUSTED AS NECESSARY FOR PROPOSED GRADING.
- 5. REFER TO GEOTECHNICAL REPORT FOR GROUNDWATER
- . MANHOLES ARE CONTROLLED AT THE CENTER OF STRUCTURE. CURB INLETS ARE CONTROLLED AT TOP FACE OF INLET (TFI), CENTERED ON THE STRUCTURE.
- 8. AREA AND VALLEY INLETS ARE CONTROLLED AT THE CENTER OF
- 9. UTILITY TRENCHES ARE TO BE COMPACTED PER JURISDICTION CRITERIA, PIPE MANUFACTURER RECOMMENDATION, AND GEOTECHNICAL REPORT, WHICHEVER IS STRICTER.
- 10. ALL STORM DRAIN AND SANITARY SEWER LINES TO HAVE WATER-TIGHT GASKETS.
- 11. ALL REINFORCED CONCRETE PIPE (RCP) TO BE CLASS III OR APPROVED EQUIVALENT UNLESS OTHERWISE NOTED.
- 12. ALL STORM DRAIN AND SANITARY SEWER PVC TO BE SDR35 UNLESS
- OTHERWISE NOTED OR REQUIRED BY THE JURISDICTION. 13. ALL WATER LINE PVC TO BE C900 UNLESS OTHERWISE NOTED OR



CONTRACTOR TO FIELD VERIFY LOCATION OF ALL EXISTING UTILITES PRIOR TO CONSTRUCTION

WORK SHALL BE CONSTRUCTED TO CITY OF THORNTON STANDARDS AND SPECIFICATIONS. THIS APPROVAL IS FOR CONFORMANCE WITH THESE STANDARDS AND SPECIFICATIONS AND OTHER CITY REQUIREMENTS. THE DESIGN AND CONCEPT REMAINS THE RESPONSIBILITY OF THE PROFESSIONAL ENGINEER OR LANDSCAPE PROFESSIONAL.

LIBRAR THINK

FOR AND ON BEHALF

OF WARE MALCOMB

WARE

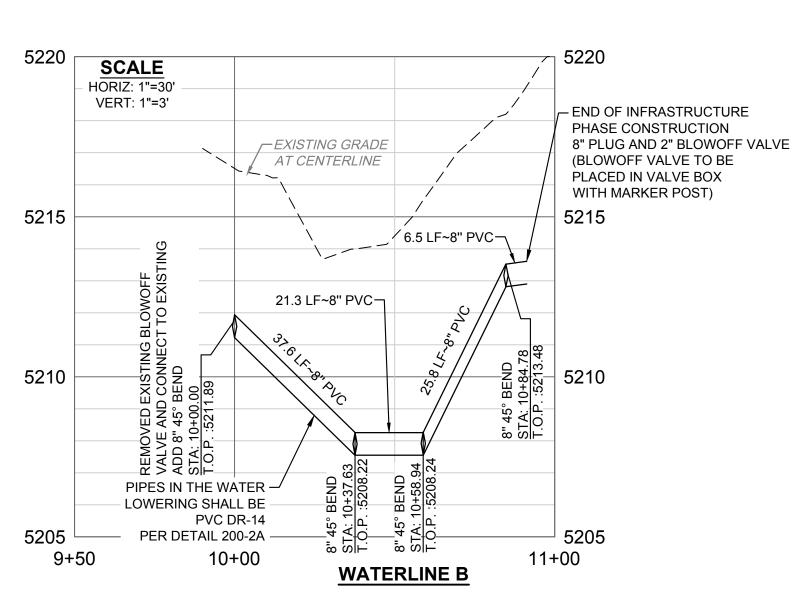
OVERALL UTILITY PLAN	REMARKS	60% CD SUBMITTAL	90% CD SUBMITTAL	95% CD SUBMITTAL	100% CD SUBMITTAL		
OVER	DATE	10/07/2022	11/18/2022	04/18/2023	06/16/2023		
	ON	_	2	3	4		

		-
B NO.:	DCS22-4022	
. / PM:	J. MANN	
RAWN BY:	I. CRAWFORD	
TE:	6/13/2023	1
		ı,

UTILITY NOTES

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∕-21.3 LF~8" PVC EXISTING WATER VALVES ∕-8" 45° BEND N: 1,223,457.451 8" 45° BEND-E: 3,164,746.491 N: 1,223,457.392 E: 3,164,725.173 __25.8 LF~8" PVC ■ /--8" 45° BEND N: 1,223,439.527 **E**: 3,164,765.104 ✓ END OF INFRASTRUCTURE ■/ PHASE CONSTRUCTION - WATERLINE LOWERING ─37.6 LF~8" PVC ■\ FUTURE WATER MAIN — (BY OTHERS) 6.5 LF~8" PVC— -8" PLUG AND 2" BLOWOFF VALVE (BLOWOFF VALVE TO BE REMOVE EXISTING BLOWOFF PLACED IN VALVE BOX VALVE AND CONNECT WITH MARKER POST) TO EXISTING 8" STUB N: 1,223,439.627 ADD 8" 45° BEND E: 3,164,771.596 N: 1,223,430.46 E: 3,164,698.89 - EXISTING 8" WATERLINE **BLOWUP DETAIL B**



9+90

EXISTING PROPOSED BOUNDARY **EASEMENT** CENTERLINE CURB / GUTTER BUILDING SAWCUT N/A STORM DRAIN SANITARY WATERLINE FIRE HYDRANT WATER VALVE WATER REDUCER WATER FITTINGS $FF \leftarrow F$ WATER METER WATER PLUG WATER MANHOLE WATER PRV H2O WATER VAULT IRRIGATION ----- IRR -----OVERHEAD UTILITY CABLE TV BURIED ELECTRIC FIBER OPTIC

NATURAL GAS

TELEPHONE

FUTURE PHASE

(BY OTHERS)

UTILITY CROSSING

— UKWN — UNKNOWN UTILITY

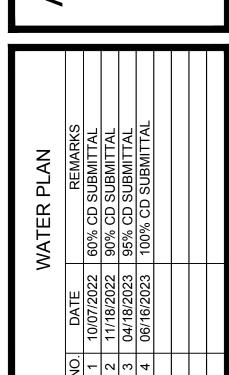
 \rightarrow GRASS SWALE

LEGEND

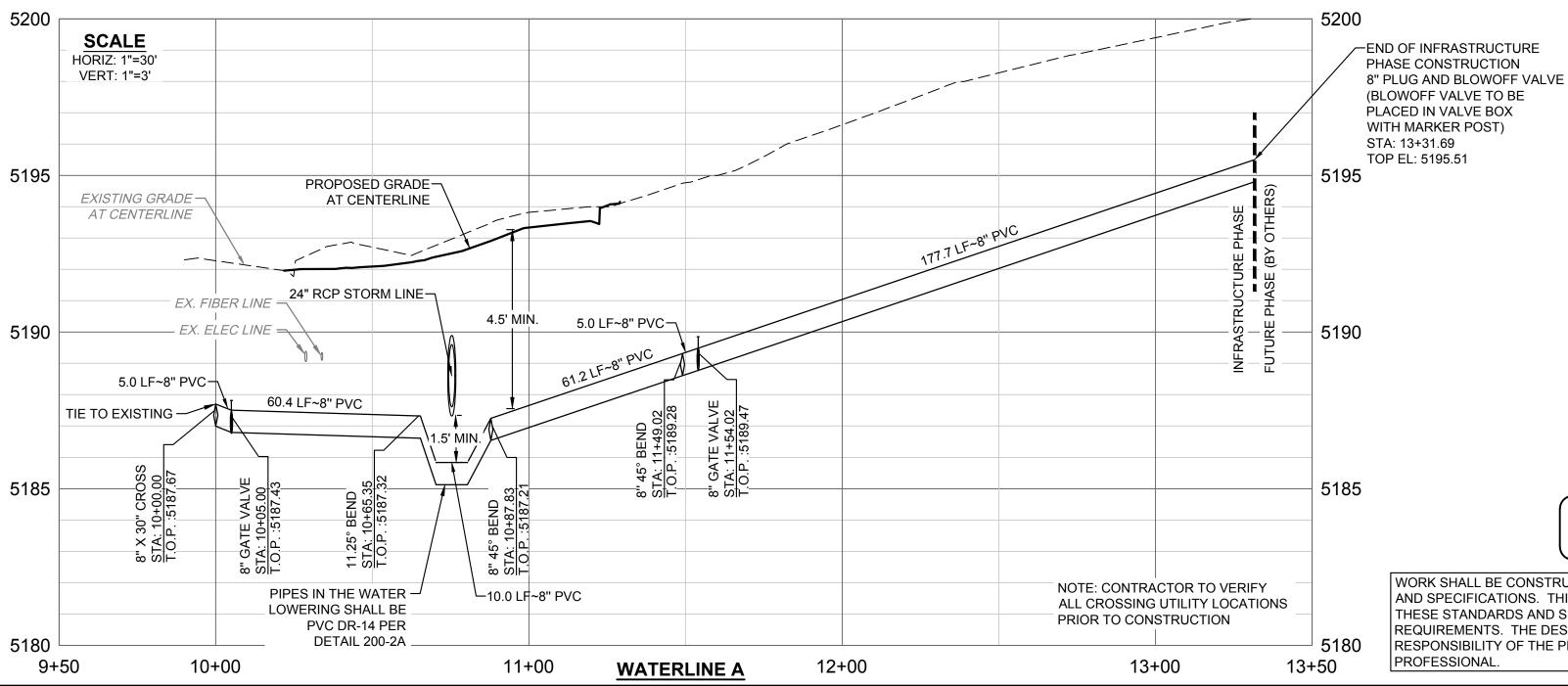
FOR AND ON BEHALF OF WARE MALCOMB

RE

LIBRAR TRU THINK ANY Z



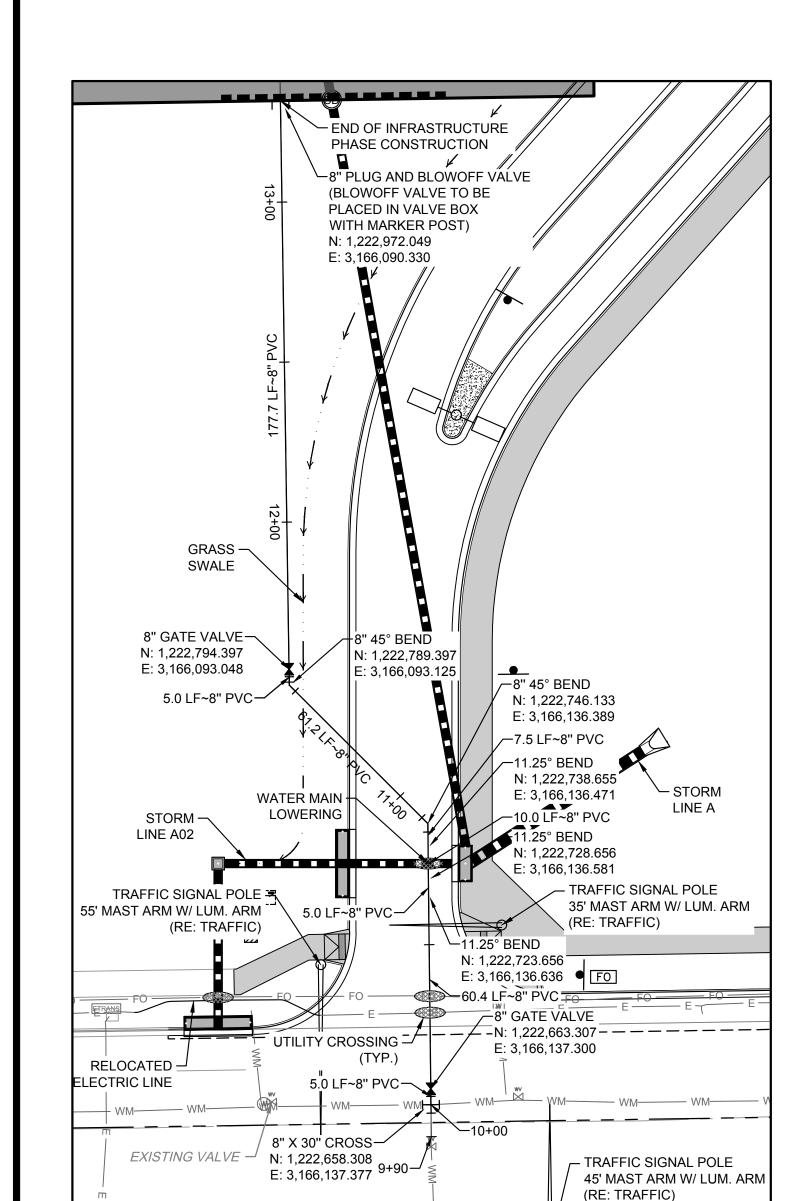
JOB NO.: DCS22-4022 PA / PM: J. MANN DRAWN BY: I. CRAWFORD 6/13/2023



SCALE: 1" = 100'

CONTRACTOR TO FIELD VERIFY LOCATION OF ALL EXISTING UTILITES PRIOR TO CONSTRUCTION

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BLOWUP DETAIL A SCALE: 1" = 30'

TRAFFIC SIGNAL POLE

(RE: TRAFFIC)

35' MAST ARM W/ LUM. ARM

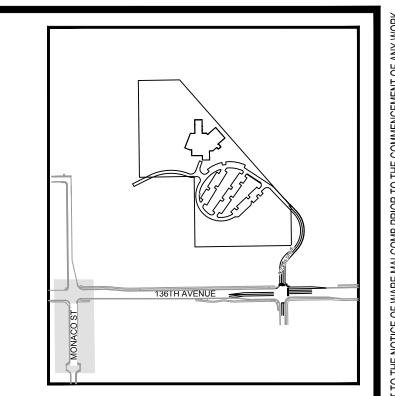
CAUTION: IF THIS SHEET IS NOT 22"x34" IT IS A REDUCED PRINT SD-INLET-A02.2 TYPE C INLET W/ CLOSED MESH GRATE 20' TYPE R INLET N: 1,222,733.656 N: 1,222,681.718 E: 3,166,070.896 E: 3,166,070.896 / SD-MH-A03 ~~ 41.0 LF - 24" RCP 5' MANHOLE N: 1,222,972.294 -SD-INLET-A02.1 E: 3,166,106.332 **SWALE** ~ 242.5 LF - 24" RCP ─ FUTURE STORM STORM LINE A02 (BY OTHERS) ─END OF INFRASTRUCTURE UTILITY CROSSING 4 **KEY MAP** PHASE CONSTRUCTION STA: 13+15.57 STORM LINE A STORM DRAIN LEGEND **EXISTING PROPOSED** SD-INLET-A02 ← LEASE BOUNDARÝ 10' MODIFIED **BOUNDARY** TYPE R INLET EASEMENT N: 1,222,733.656 E: 3,166,145.921 CURB / GUTTER ~SD-FES-A01 36" FES W/ TOE WALL BUILDING N: 1,222,773.103 SAWCUT E: 3,166,210.233 STORM DRAIN STORM CLEANOUT FLARED END SECTION STORM INLET TEMPORARY SEDIMENT BASIN **(3)** STORM MANHOLE STORM PLUG ROOF DRAIN SANITARY FOR AND ON BEHALF OF WARE MALCOMB SCALE HORIZ: 1"=30' VERT: 1"=5' OUTFALL 5200 SD-INLET-A02
10' MODIFIED
TYPE R INLET
TFI: 5192.5 ±
INV IN: 5187.56 (
INV IN: 5187.56 (
INV OUT: 5187.36
CUT=5.2±
SD-INLET-A02.
20' TYPE R INL
TFI: 5192.7 ±
INV IN: 5187.93 EXISTING GRADE = — UKWN — UNKNOWN UTILITY AT PIPE CENTERLINE CLOGGED CONDITION 5195 PONDING LIMITS UTILITY CROSSING EXISTING FIBER LINE - RELOCATED ELECTRIC LINE PROPOSED GRADE -THINK (MIN. 30" BELOW GRADE AND AT PIPE CENTERLINE 12" SEPARATION BETWEEN FIBER LINE) ^V 5-YEAR HGL 5185 - 100-YEAR HGL --~ 51.9 LF - 24" RCP @ 0.50% ~ 34.0 LF - 24" RCP @ 0.50% ANY NOTE: CONTRACTOR TO VERIFY ALL CROSSING UTILITY LOCATIONS PRIOR TO CONSTRUCTION 5180 **STORM LINE A02** 11+50 9+50 10+00 11+00 5210 5210 . (24" RC .22 (24" | **SCALE** HORIZ: 1"=30' VERT: 1"=5' 5205 EXISTING GRADE AT-PIPE CENTERLINE GRASS-LINED -SWALE 5200 PROPOSED GRADE AT PIPE CENTERLINE ADD JOINT FASTENERS -BETWEEN FES AND LAST PIPE SECTION. TRIM BOLTS TO THE NUT INSIDE THE PIPE 5195 1.5' MIN. 36" FES W/ TOE WALL — ~ 72.6 LF - 36 RCP @ 0.50% FES INV OUT: 5187.00 -5190 JOB NO.: PA / PM: DRAWN BY: 5185 TOE WALL - SEE DETAIL SHEET C10.0 -WORK SHALL BE CONSTRUCTED TO CITY OF THORNTON STANDARDS AND SPECIFICATIONS. THIS APPROVAL IS FOR CONFORMANCE WITH CONTRACTOR TO FIELD VERIFY THESE STANDARDS AND SPECIFICATIONS AND OTHER CITY LOCATION OF ALL EXISTING UTILITES REQUIREMENTS. THE DESIGN AND CONCEPT REMAINS THE PRIOR TO CONSTRUCTION RESPONSIBILITY OF THE PROFESSIONAL ENGINEER OR LANDSCAPE SCALE: 1" = 40' 5180 **PROFESSIONAL** 9+50 10+00 11+00 STORM LINE A 12+00 13+00 13+50

WARE

DCS22-4022

J. MANN I. CRAWFORD

6/13/2023



SS-MH-A02

N: 1,222,286.699

E 3.164,724,790

MONACO ST

- SANITARY LINE A

13+00

EXISTING GRADE AT CENTERLINE -

.97 88.

12+00

4' SSMH

RAISED CROSSING TO BE

NOTE: CONTRACTOR TO VERIFY

PRIOR TO CONSTRUCTION

_ EX. 18" COT —

1.5' MIN.

- CONTRACTOR TO VERIFY

PRIOR TO CONSTRUCTION

EX. INVERT ELEVATION

STORM LINES -

11+00

EX. 8" WATER LINE -

193.9 LF~8" PVC @ 0.50%

ALL CROSSING UTILITY LOCATIONS

9+80 10+00 - SS |

SCALE

HORIZ: 1"=40'

VERT: 1"=5'

5210

5205

5200

5195

5190

5185

9+50

-SS-MH-A01

EXISTING MANHOLE

N: 1,222,092.780 E: 3,164,727.757

REPLACED AS NECESSARY

FOR SANITARY MAIN INSTALLATION

SECTION CORNER (TYP.)

TO CONSTRUCTION)

15+00

– UTILITY

EX. FIBER LINE -

EX. ELEC. LINE —

_ EX. ELEC. LINE —

EX. 36" WATER LINE —

15+00

V CROSSING (TYP.) — WM—

∽SS-MH-A03

- CURB & GUTTER REPLACED

RAMP

– WALK

REPLACED

REPLACED '

[→] 5215

5205

5195

5190

5185

16+50

5210

4' SSMH N: 1,222,701.029 E: 3,164,718.450

(CORNER WILL NEED TO BE

RESET IF DISTURBED DUE

EX. GAS LINE

EX. ELEC LINES —

414.4 LF~8" PVC @ 0.82%

14+00

SANITARY LINE A

13+00

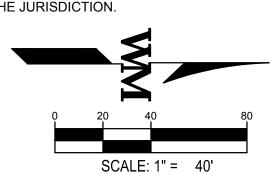
414.4 LF~8" PVC-

14+00

EXISTING		PROPOSED
	BOUNDARY	
	EASEMENT	
	CENTERLINE	
	CURB / GUTTER	
	BUILDING	
N/A	SAWCUT	
	STORM DRAIN	
——— SS ———	SANITARY	—— ss ——
OC.0.	SANITARY CLEANOUT	● C.O.
S	SANITARY MANHOLE	S
	SANITARY PLUG	
WM	WATERLINE	WM
——— IRR ———	IRRIGATION	IRR
——— OH ———	OVERHEAD UTILITY	—— ОН ——
——— CATV ———	CABLE TV	CATV
——Е—	BURIED ELECTRIC	——Е—
—— FO ——	FIBER OPTIC	—— FO ——
NGAS	NATURAL GAS	NGAS
T	TELEPHONE	—— т ——
UKWN	UNKNOWN UTILITY	N/A
	UTILITY CROSSING	i

UTILITY NOTES

- EXISTING UTILITIES WHERE NEW GRADING OR UTILITY WORK WILL OCCUR AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES OR CONFLICTS. ENGINEER WILL NOT BE LIABLE FOR ANY COSTS ASSOCIATED WITH CHANGES TO THE
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- 5. REFER TO GEOTECHNICAL REPORT FOR GROUNDWATER
- JURISDICTION CRITERIA, PIPE MANUFACTURER RECOMMENDATION, AND GEOTECHNICAL REPORT,
- 10. ALL STORM DRAIN AND SANITARY SEWER LINES TO HAVE
- 11. ALL REINFORCED CONCRETE PIPE (RCP) TO BE CLASS III OR
- 12. ALL STORM DRAIN AND SANITARY SEWER PVC TO BE SDR35 UNLESS OTHERWISE NOTED OR REQUIRED BY THE
- OR REQUIRED BY THE JURISDICTION.



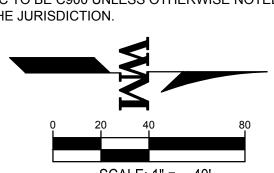
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EXISTING		PROPOSED
	BOUNDARY	
	EASEMENT	
	CENTERLINE	
	CURB / GUTTER	
	BUILDING	
N/A	SAWCUT	
	STORM DRAIN	
——— SS ———	SANITARY	—— ss ——
OC.0.	SANITARY CLEANOUT	● C.O.
S	SANITARY MANHOLE	S
	SANITARY PLUG	
WM	WATERLINE	WM
——— IRR ———	IRRIGATION	——— IRR ———
——— OH ———	OVERHEAD UTILITY	—— ОН ——
——— CATV ———	CABLE TV	—— CATV ——
——Е—	BURIED ELECTRIC	——E——
——— FO ———	FIBER OPTIC	F0
NGAS	NATURAL GAS	NGAS
T	TELEPHONE	
UKWN	UNKNOWN UTILITY	N/A
	UTILITY CROSSING	i

- 1. CONTRACTOR SHALL VERIFY THE ELEVATION OF ALL DESIGN WITHOUT PROPER NOTIFICATION.
- AND SURVEY INFORMATION.
- 4. EXISTING UTILITY STRUCTURES TO BE ADJUSTED AS NECESSARY FOR PROPOSED GRADING.
- ELEVATIONS. 6. MANHOLES ARE CONTROLLED AT THE CENTER OF
- STRUCTURE. 7. CURB INLETS ARE CONTROLLED AT TOP FACE OF INLET (TFI)
- CENTERED ON THE STRUCTURE. 8. AREA AND VALLEY INLETS ARE CONTROLLED AT THE CENTER OF STRUCTURE.
- 9. UTILITY TRENCHES ARE TO BE COMPACTED PER
- WHICHEVER IS STRICTER.
- WATER-TIGHT GASKETS.
- APPROVED EQUIVALENT UNLESS OTHERWISE NOTED.
- JURISDICTION. 13. ALL WATER LINE PVC TO BE C900 UNLESS OTHERWISE NOTED



JOB NO.: DCS22-4022

CONSTRUCTI

WARE

FOR AND ON BEHALF OF WARE MALCOMB

LIBRARY

THINK

PA / PM: J. MANN I. CRAWFORD DRAWN BY: 6/13/2023

UNLESS OTHERWISE NOTED OR REQUIRED BY THE

OR REQUIRED BY THE JURISDICTION.

13. ALL WATER LINE PVC TO BE C900 UNLESS OTHERWISE NOTED

JURISDICTION.

— UKWN — UNKNOWN UTILITY

UTILITY CROSSING

FOR AND ON BEHALF OF WARE MALCOMB

LIBRAR

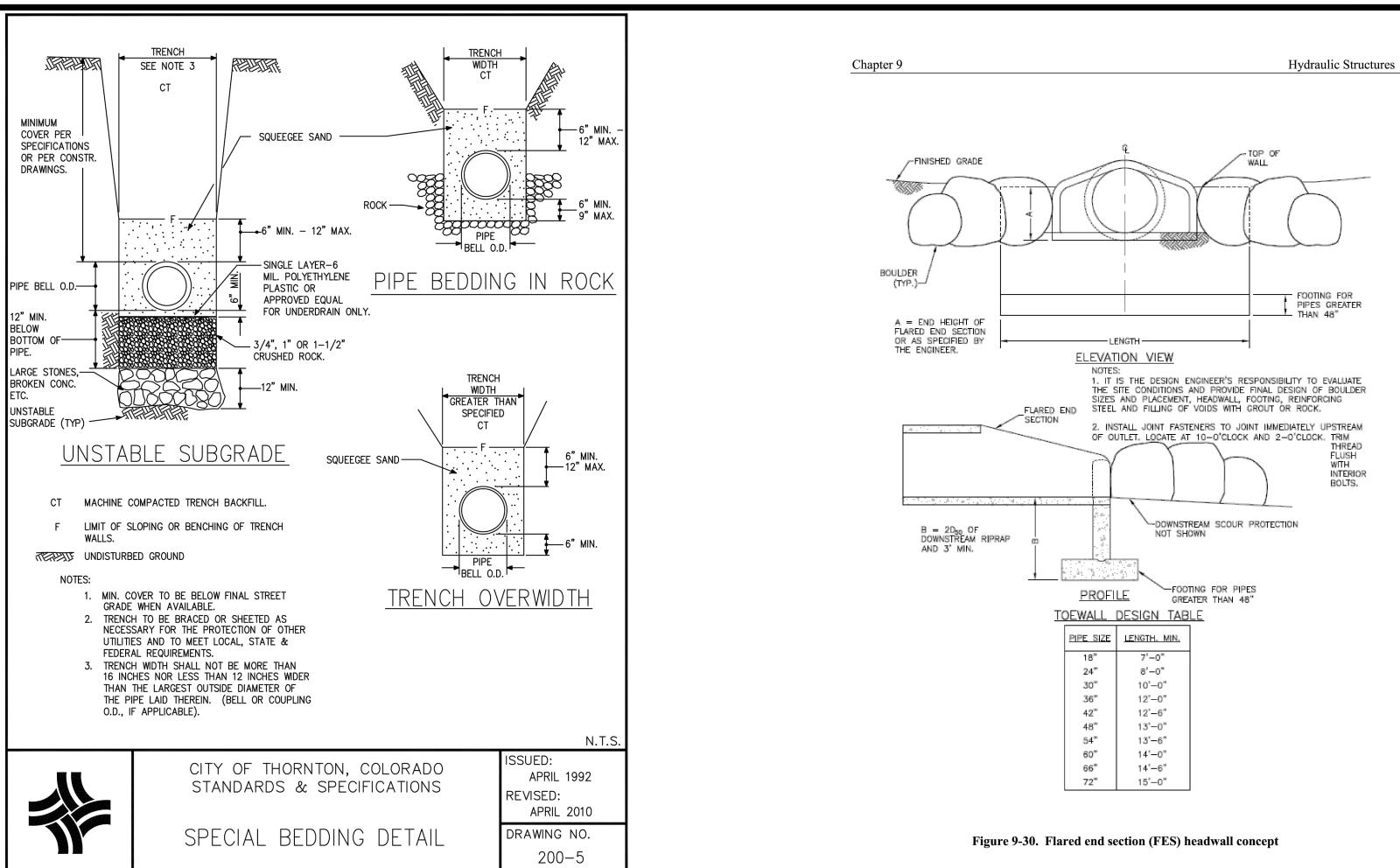
JOB NO.: DCS22-4022 PA / PM: J. MANN DRAWN BY: I. CRAWFORD 6/13/2023

REQUIREMENTS. THE DESIGN AND CONCEPT REMAINS THE

PROFESSIONAL.

RESPONSIBILITY OF THE PROFESSIONAL ENGINEER OR LANDSCAPE

FOOTING FOR
PIPES GREATER
THAN 48"



September 2017

Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 2

- CENTER LINE

├-PROPERTY LINE

FIRE HYDRANT ASSEMBLY

N.T.S.

APRIL 1992

APRIL 2010

200-1

DRAWING NO.

REVISED:

(DETAIL 200-10)

- GATE VALVE (TYP.)

---STORM-

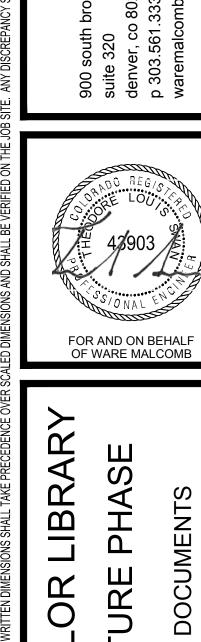
CITY OF THORNTON, COLORADO

STANDARDS & SPECIFICATIONS

TYPICAL UTILITY LAYOUT DETAIL

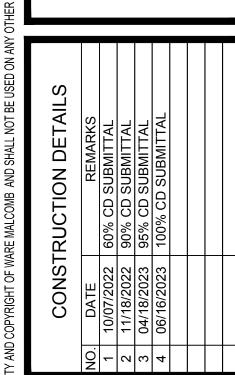
MANHOLE-

CURB LINE

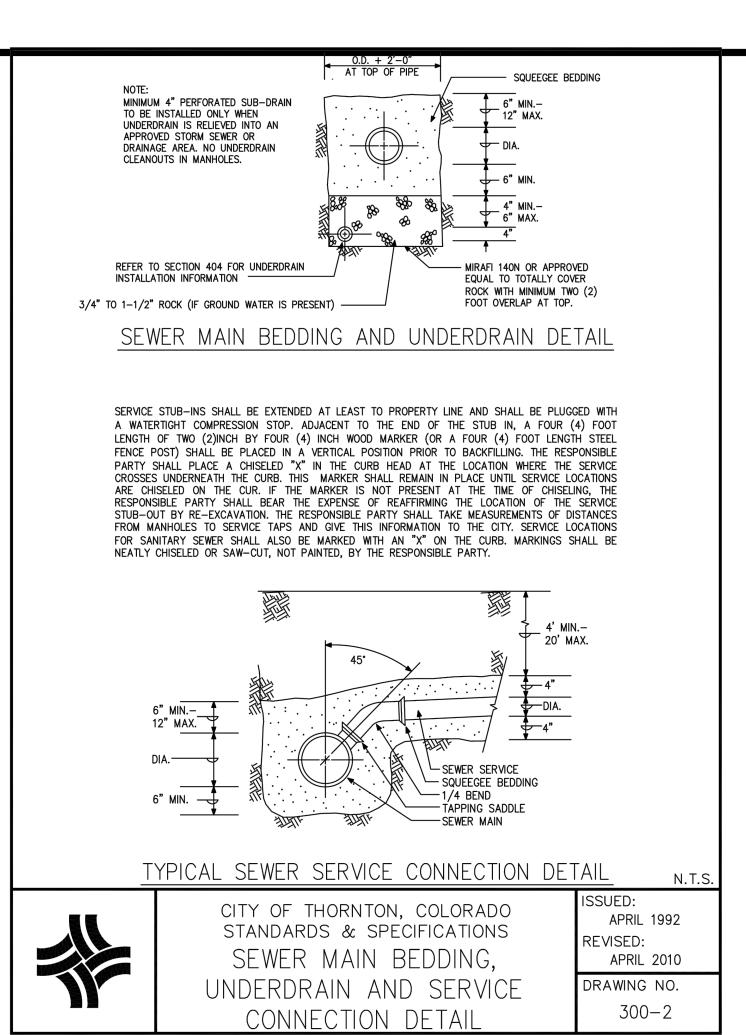


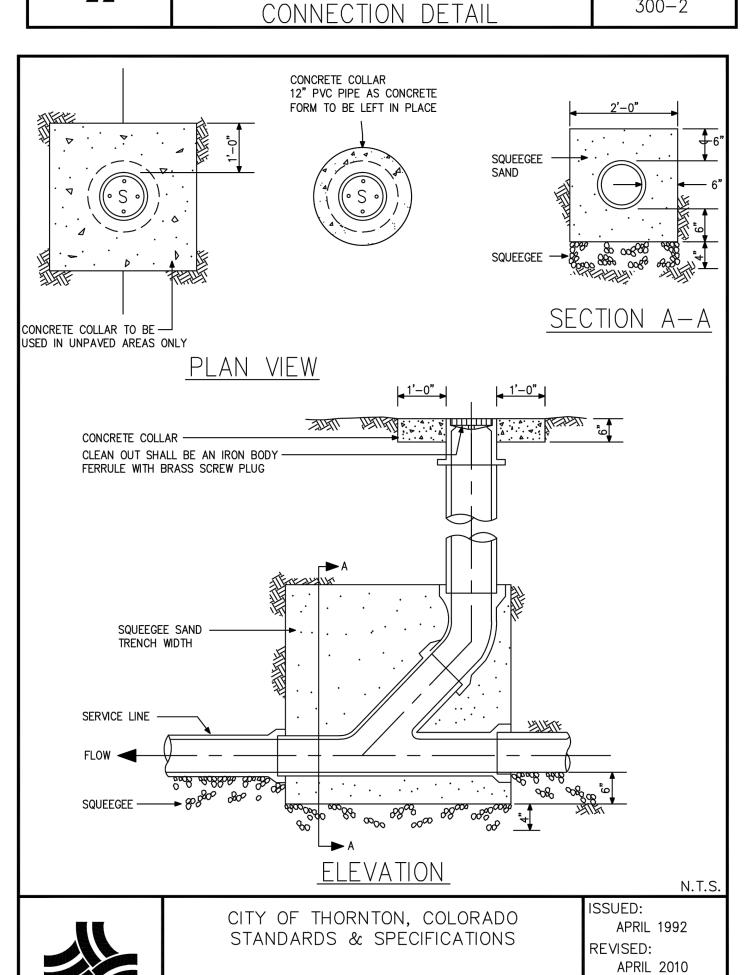
WARE

OR INFRASTRU **ANYTHINK A**



JOB NO.:	DCS22-4022
PA / PM:	J. MANN
DRAWN BY:	I. CRAWFORD
DATE:	6/13/2023

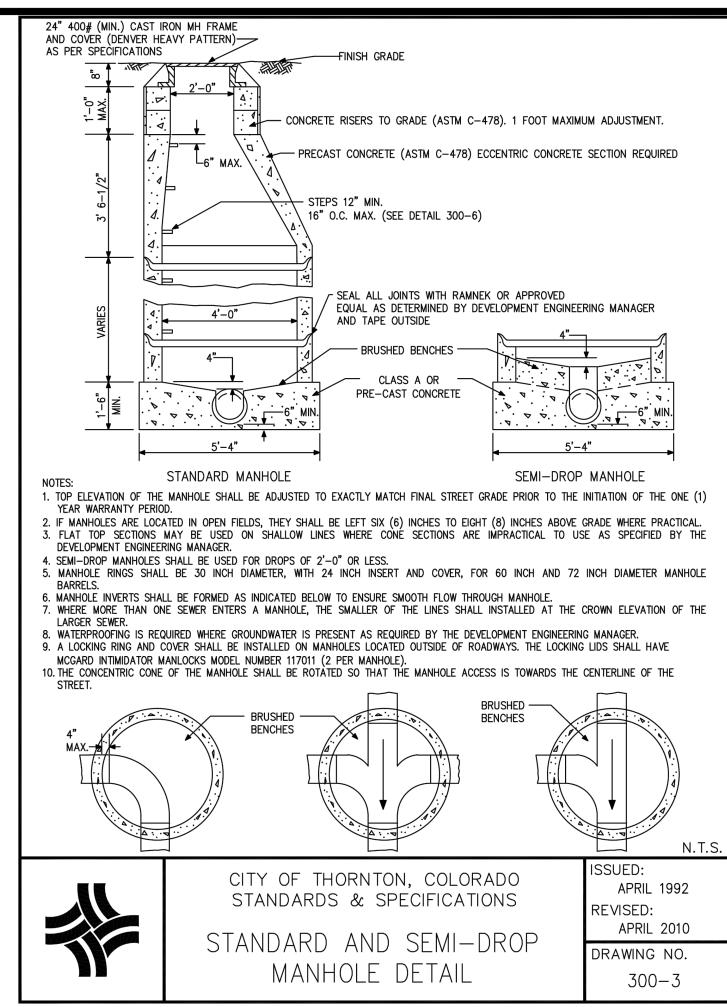


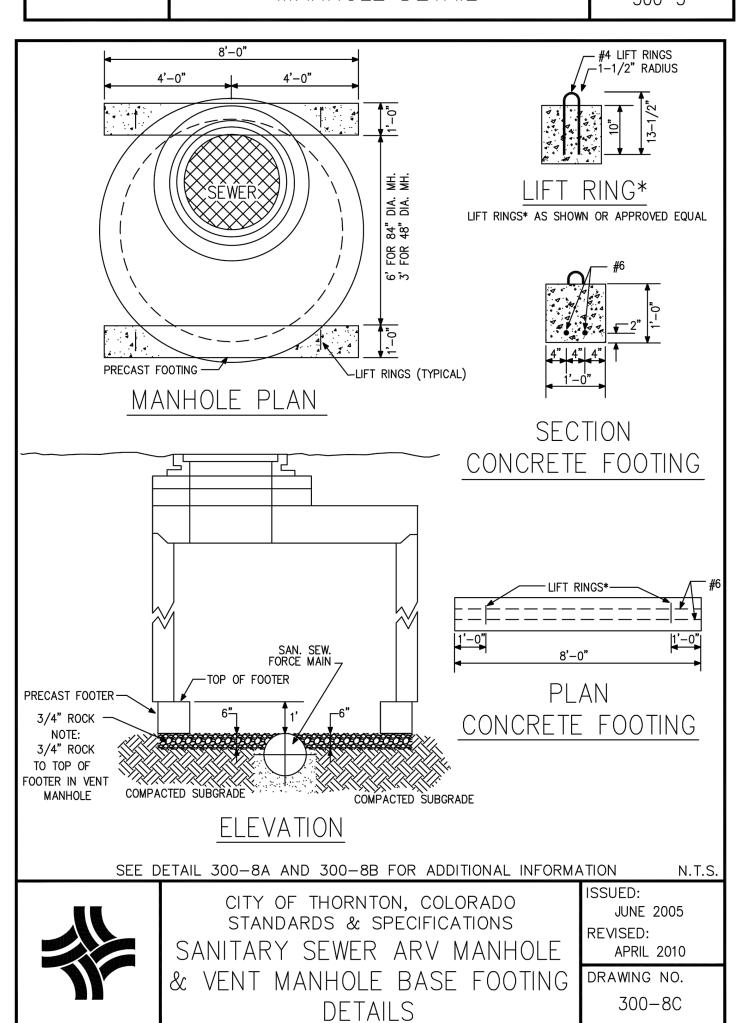


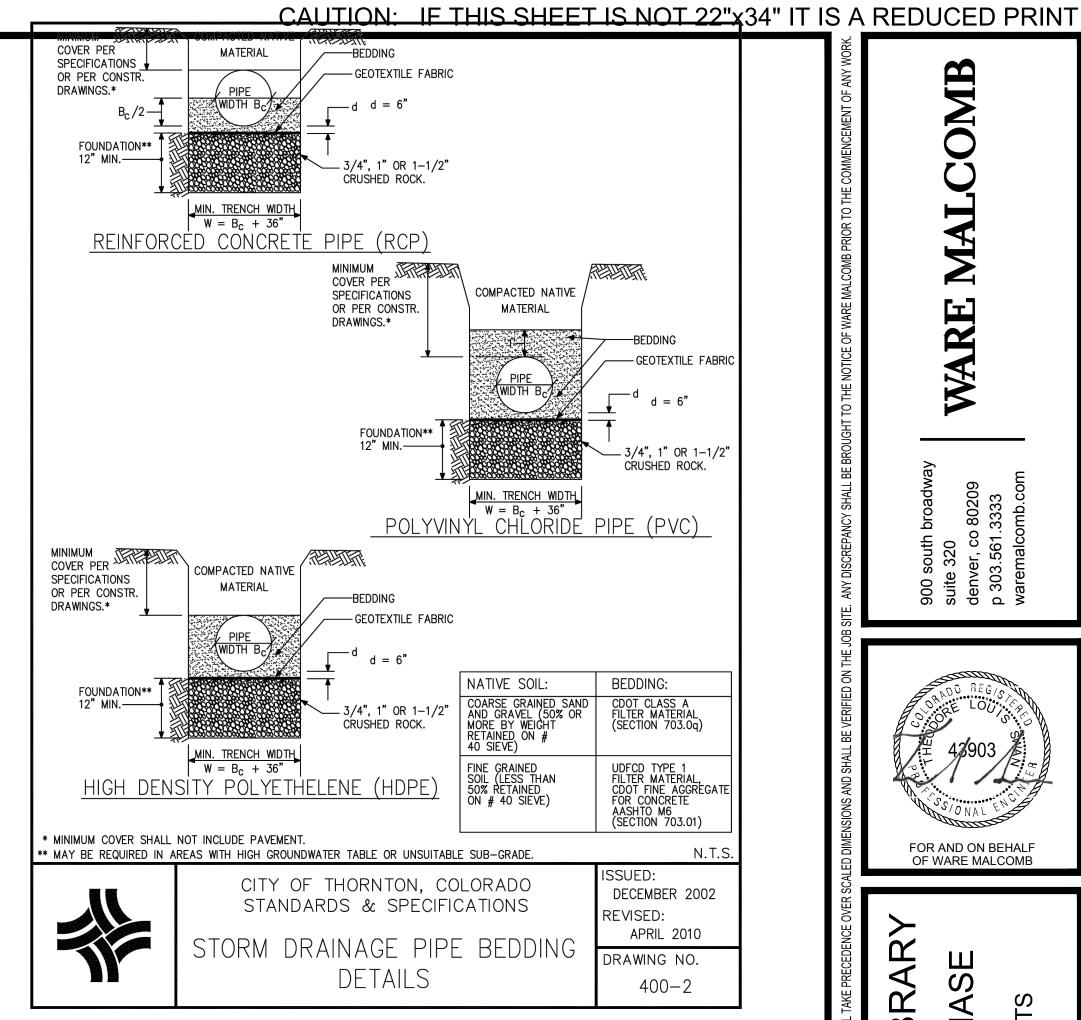
STANDARD CLEAN-OUT DETAIL

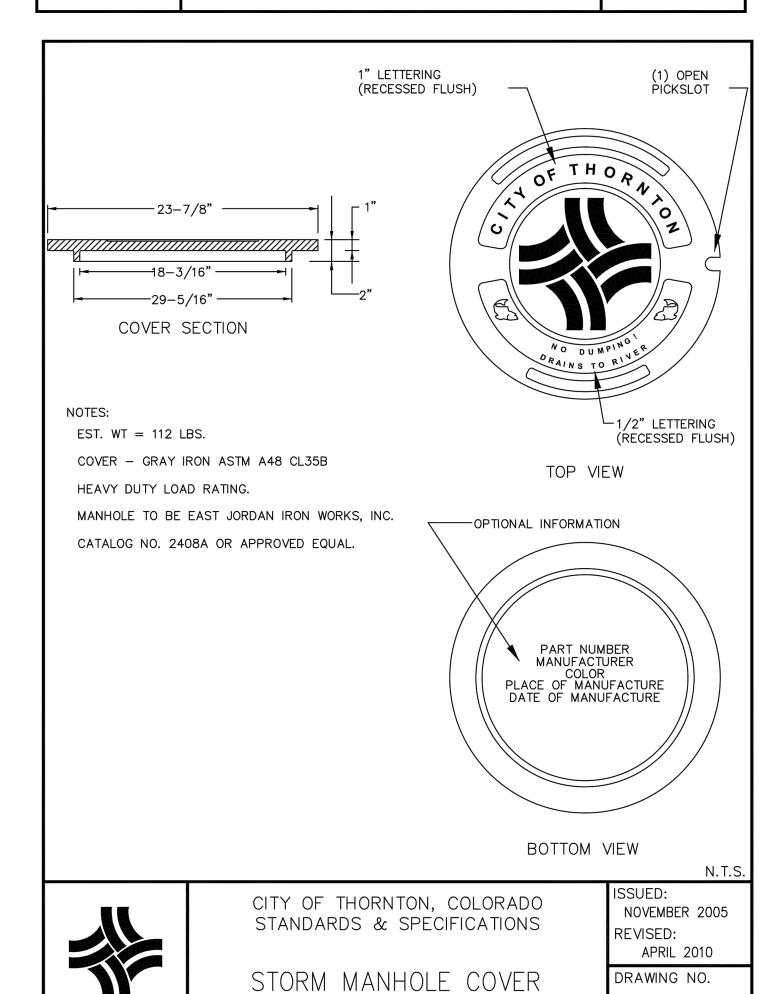
DRAWING NO.

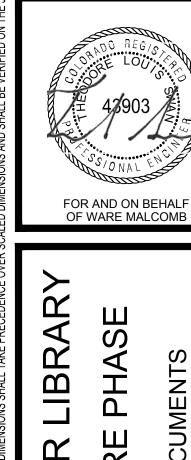
300-7











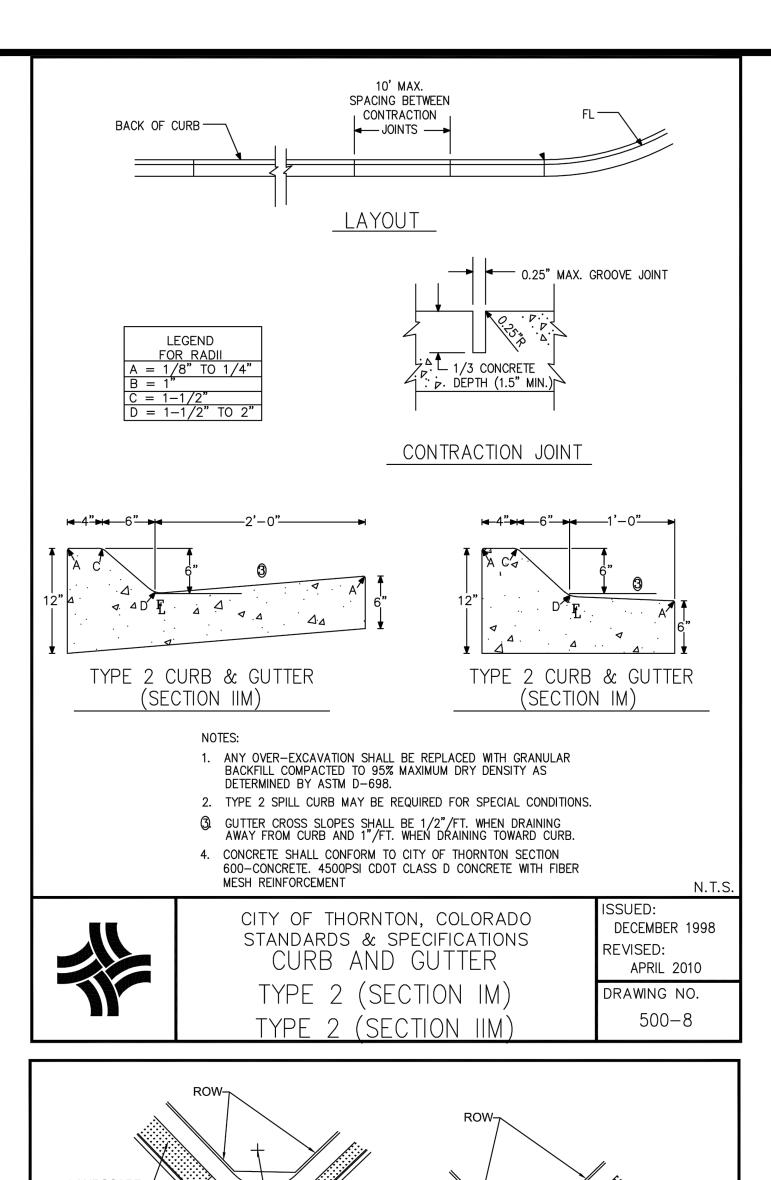
WARE

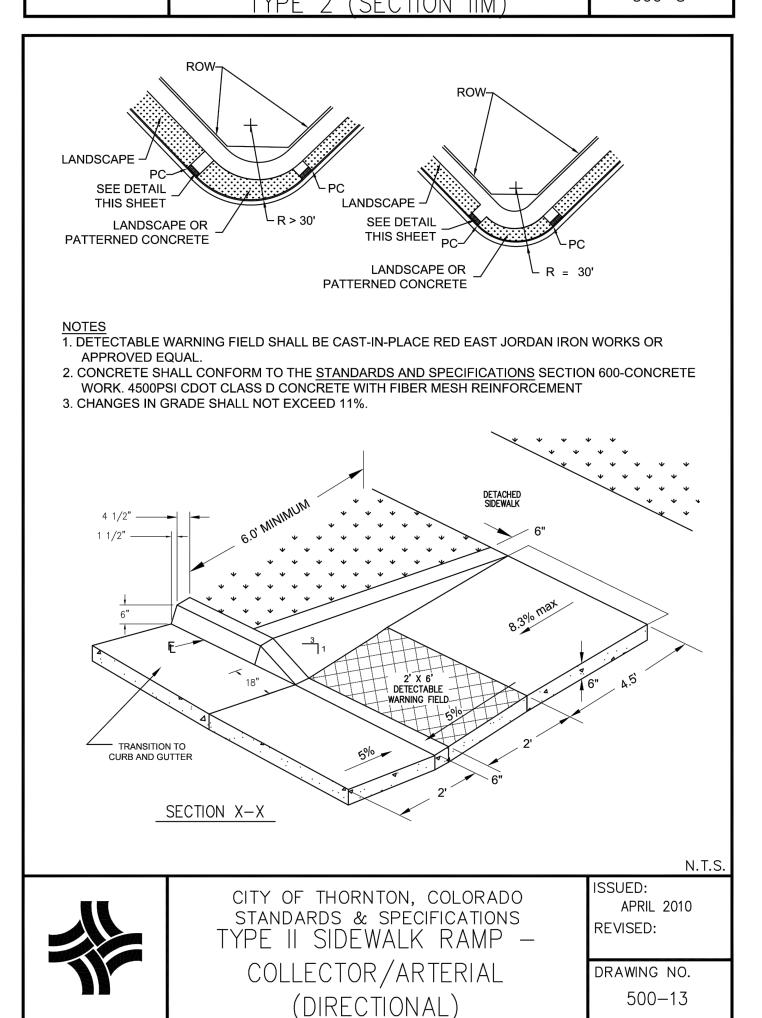
THINK ANY

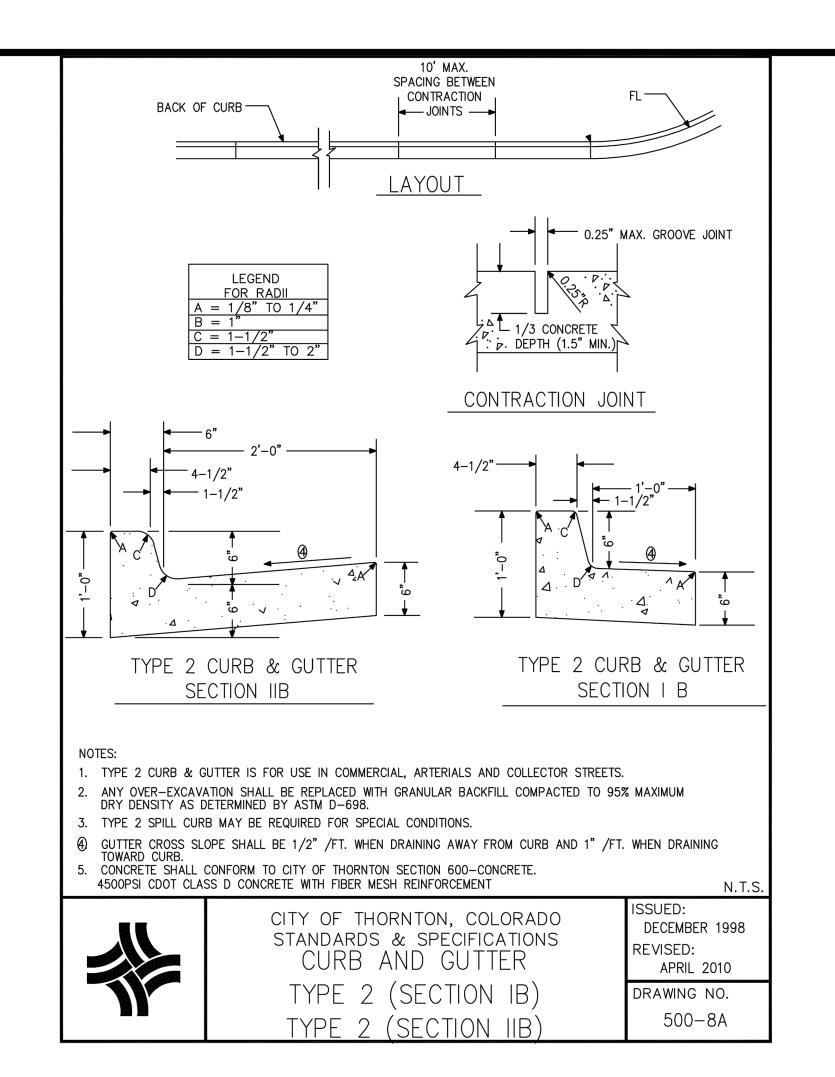
CONSTRUCTION DETAILS	REMARKS	60% CD SUBMITTAL	90% CD SUBMITTAL	95% CD SUBMITTAL	100% CD SUBMITTAL		
CONS	DATE	10/07/2022	11/18/2022	04/18/2023	06/16/2023		
	NO.	1	2	3	4		

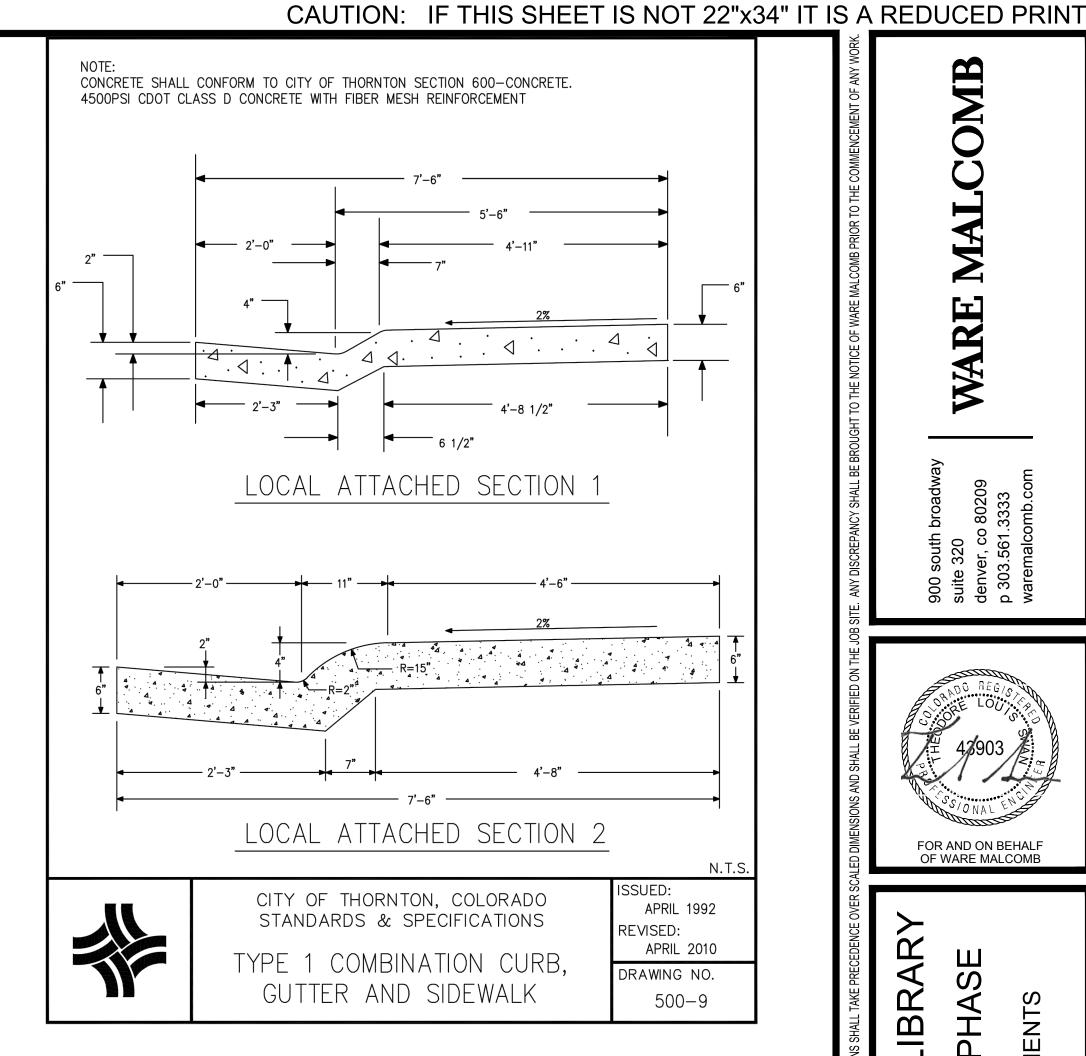
JOB NO.:	DCS22-4022
PA / PM:	J. MANN
DRAWN BY:	I. CRAWFORD
DATE:	6/13/2023

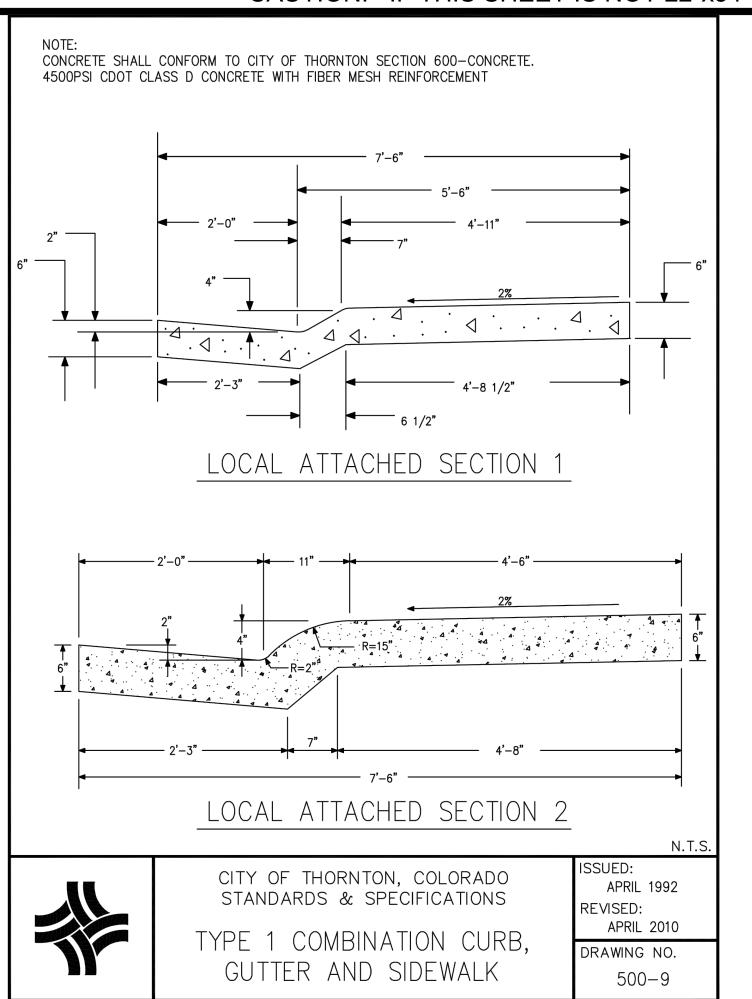
400 - 3



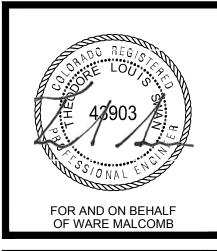








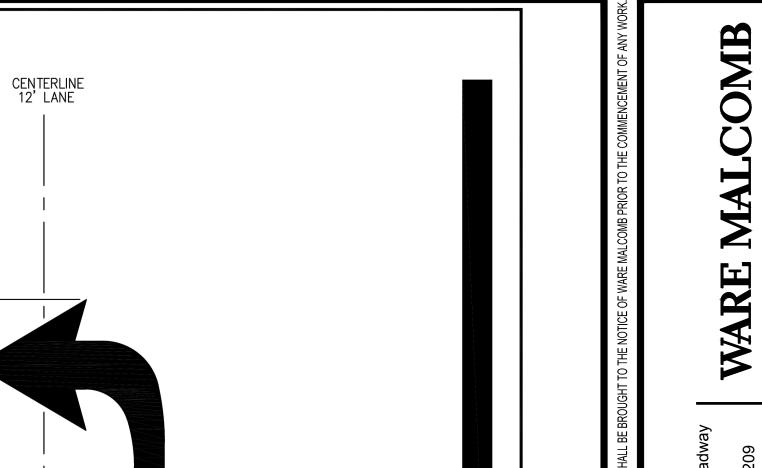
WARE



LIBRAR

MENT OR ANYTHINK

DCS22-4022 PA / PM: J. MANN I. CRAWFORD DRAWN BY: 6/13/2023



FOR AND ON BEHALF OF WARE MALCOMB

N.T.S. SSUED: FEBRUARY 2003 REVISED: APRIL 2010

8'-0"

CITY OF THORNTON, COLORADO

STANDARDS & SPECIFICATIONS

TURN ARROW PAVEMENT MARKING

DETAIL

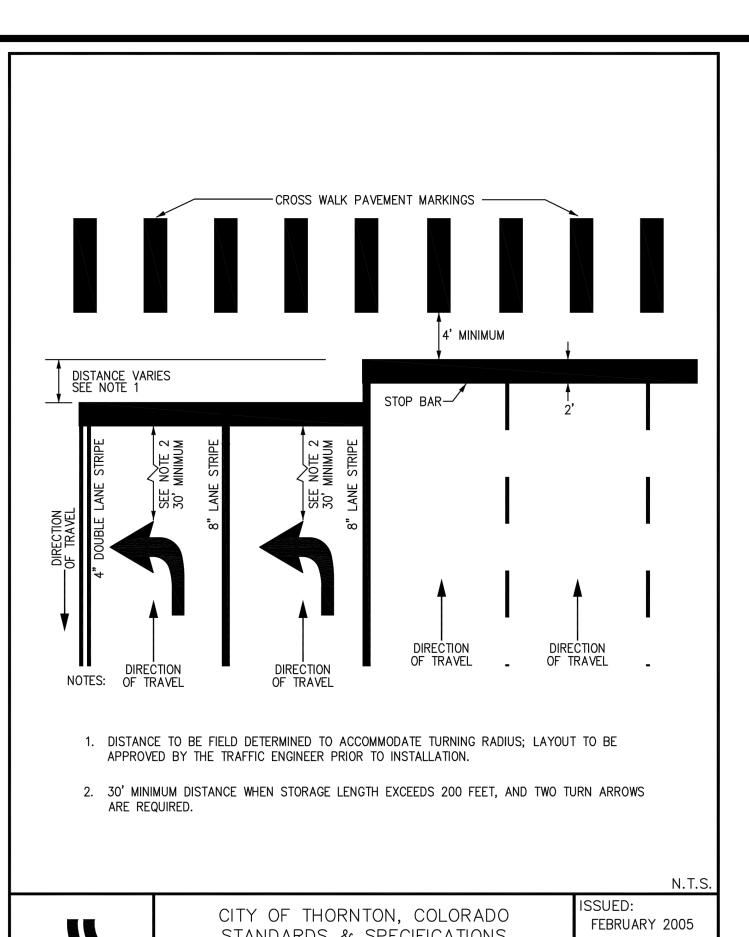
DRAWING NO. 700-17 LIBRARY DOCUMENT

END OF 8" SOLID WHITE LANE STRIPE

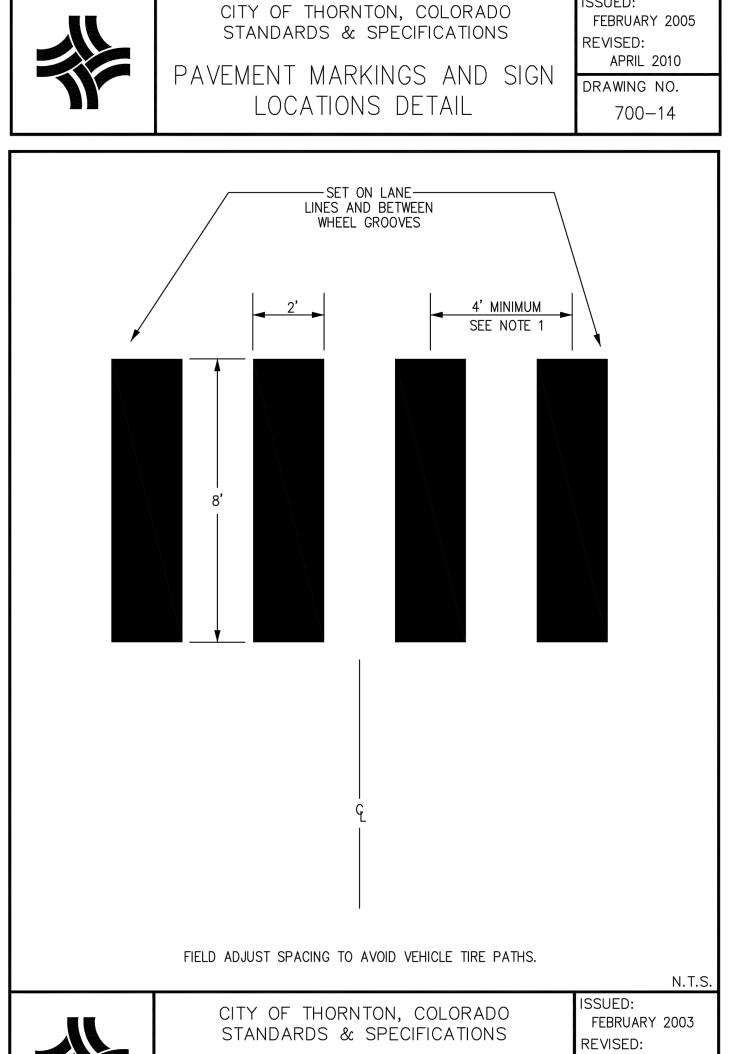
OR ANYTHINK

DCS22-4022 J. MANN DRAWN BY: I. CRAWFORD

6/13/2023







THE STOP SIGN SHALL BE LOCATED AS CLOSE AS

INTENDED TO REGULATE.

R1-1 (STOP SIGN)

LOCATIONS.

SEE DETAIL NO. 700-17 FOR TURN ARROW

LOCATE ON TAPER

LOCATION.

SOLID WHITE LANE STRIPE

SEE DETAIL NO. 700-16A & 16B FOR CROSSWALK AND STOP BAR

R3-7R (RIGHT LANE MUST TURN RIGHT SIGN)

R3-7R (RIGHT LANE MUST TURN RIGHT SIGN)

PLACEMENT OF SIGNS NEED TO ALLOW FOR

SIDEWALKS AND FOLLOW MUTCD GUIDELINES.

PRACTICAL TO THE INTERSECTION IT REGULATES, WHILE OPTIMIZING IT'S VISIBILITY TO THE ROAD USER IT IS

SIDEWALK

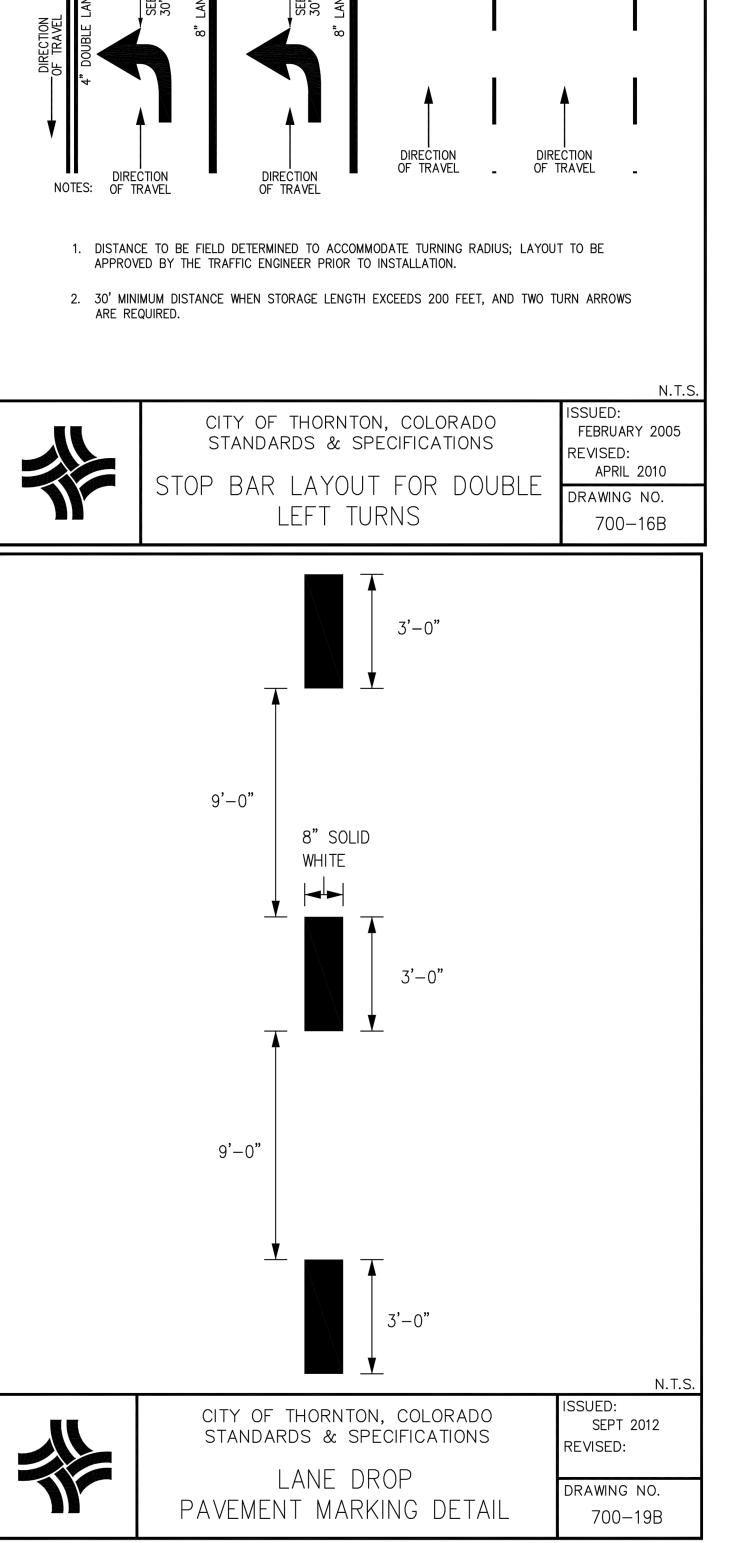
SIDEWALK



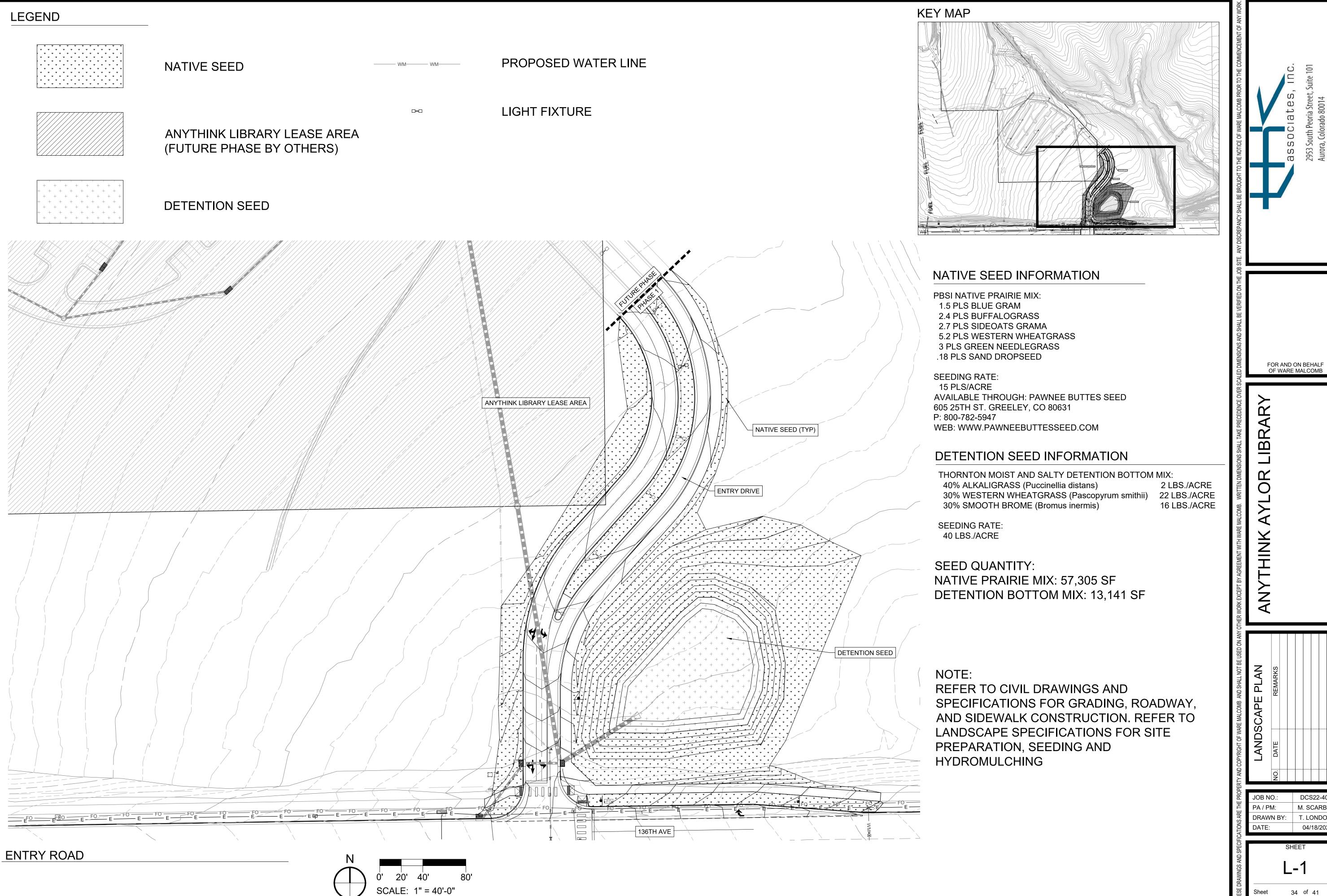
CROSSWALK PAVEMENT MARKING DETAIL

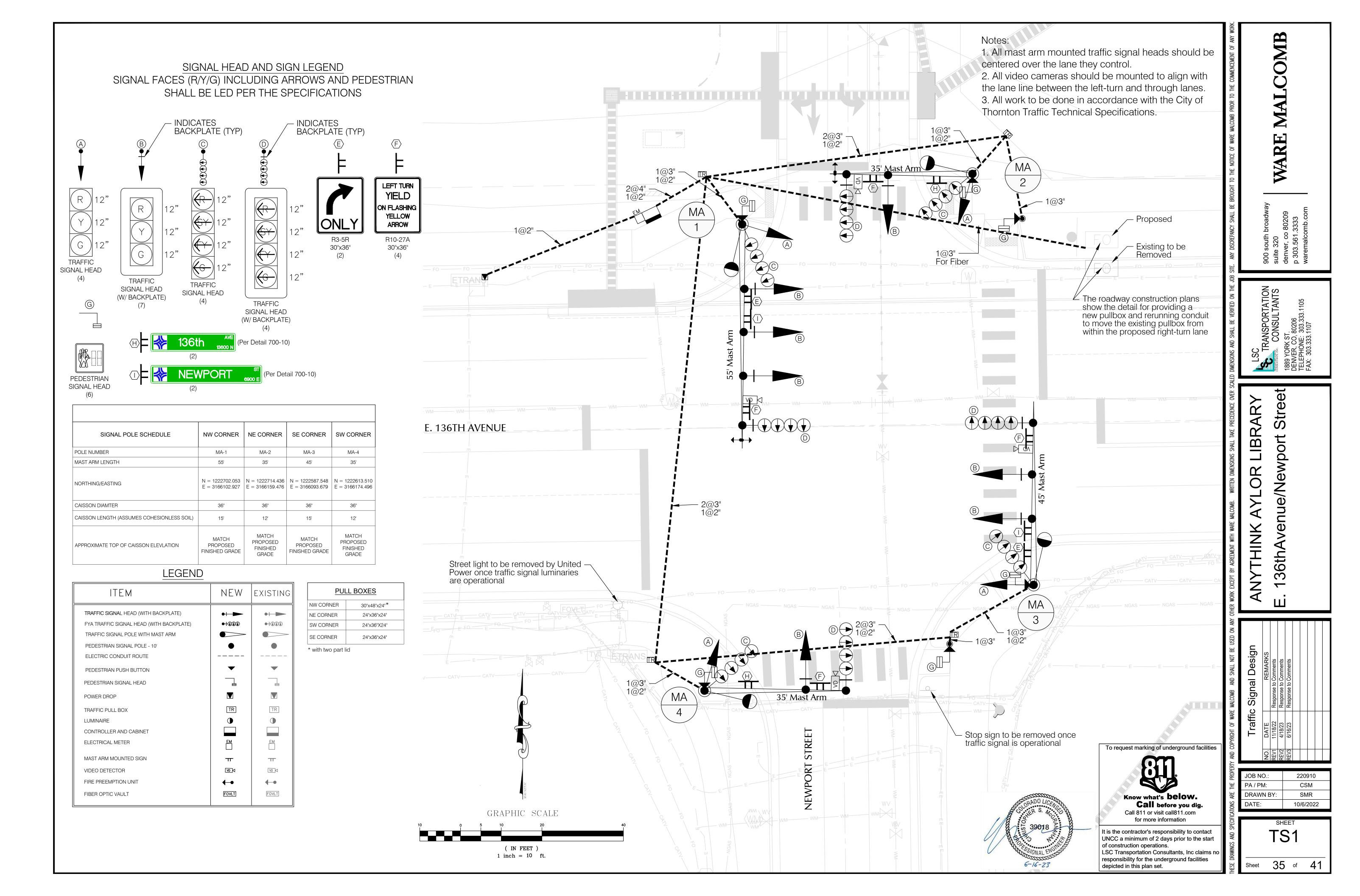
APRIL 2010 DRAWING NO. 700-18

N.T.S.



DCS22-4022 M. SCARBOR T. LONDONO 04/18/2023





	_			
KEY	NOTE	MATERIALS LIST	UNIT	QUANTITY
	*	TRAFFIC SIGNAL POLE, 35 FOOT MAST ARM W/ LUM. ARM (FURNISH AND INSTALL)	EACH	2
•	*	TRAFFIC SIGNAL POLE, 45 FOOT MAST ARM W/ LUM. ARM (FURNISH AND INSTALL)	EACH	1
•	*	TRAFFIC SIGNAL POLE, 55 FOOT MAST ARM W/ LUM. ARM (FURNISH AND INSTALL)	EACH	1
←→		OPTICOM GLOBAL TRAFFIC TECHNOLOGIES, 722 DETECTOR	EACH	2
	*	TRAFFIC SIGNAL CONTROLLER (COBALT RM) AND CABINET (333SD-ITS) (FURNISH AND INSTALL)	EACH	1
TR		PULL BOX 24"x36"x24"	EACH	3
TR		PULL BOX 30"x48"x24" - WITH TWO PART LID	EACH	1
VD <	*	MODULAR VIDEO DETECTION SYSTEM (FURNISH AND INSTALL)	EACH	4
		CONDUIT (2")	LF	400
		CONDUIT (3")	LF	700
		CONDUIT (4")	LF	35
		INTERSECTION WIRING (PER INTERSECTION)	EACH	1
		UNINTERRUPTED POWER SUPPLY	EACH	1
		PEDESTRIAN SIGNAL HEAD, COUNTDOWN (LED)	EACH	6
_	*	PUSH BUTTON STATION INSTALL ONLY	EACH	6
		ETHERNET FIELD SWITCH	EACH	1
		12 STRAND FIBER OPTIC CABLE	LF	200
•		TRAFFIC SIGNAL HEAD, 3-SECTION, 12' LENSES (LED)	EACH	4
•		TRAFFIC SIGNAL HEAD W/ BACKPLATE, 3-SECTION, 12' LENSES (LED)	EACH	7
●		TRAFFIC SIGNAL HEAD, 4-SECTION, 12' LENSES (LED)	EACH	4
● ⊕⊕⊕		TRAFFIC SIGNAL HEAD W/ BACKPLATE, 4-SECTION, 12' LENSES (LED)	EACH	4
TT	*	STREET NAME SIGN (LED INTERNALLY ILLUMINATED) (FURNISH AND INSTALL)	EACH	4
	*	LED LUMINAIRE (FURNISH AND INSTALL)	EACH	4
		TRAFFIC CONTROL	LS	1
		10 FOOT PEDESTRIAN POLE	EACH	2
Т		MAST ARM MOUNTED SIGN R3-5R (30"X36")	EACH	2
Т		MAST ARM MOUNTED SIGN R10-27A (30"X36")	EACH	4
▼ & EM		POWER DROP AND METER	EACH	1
		MOBILIZATION	LS	1
		POTHOLING	LS	1

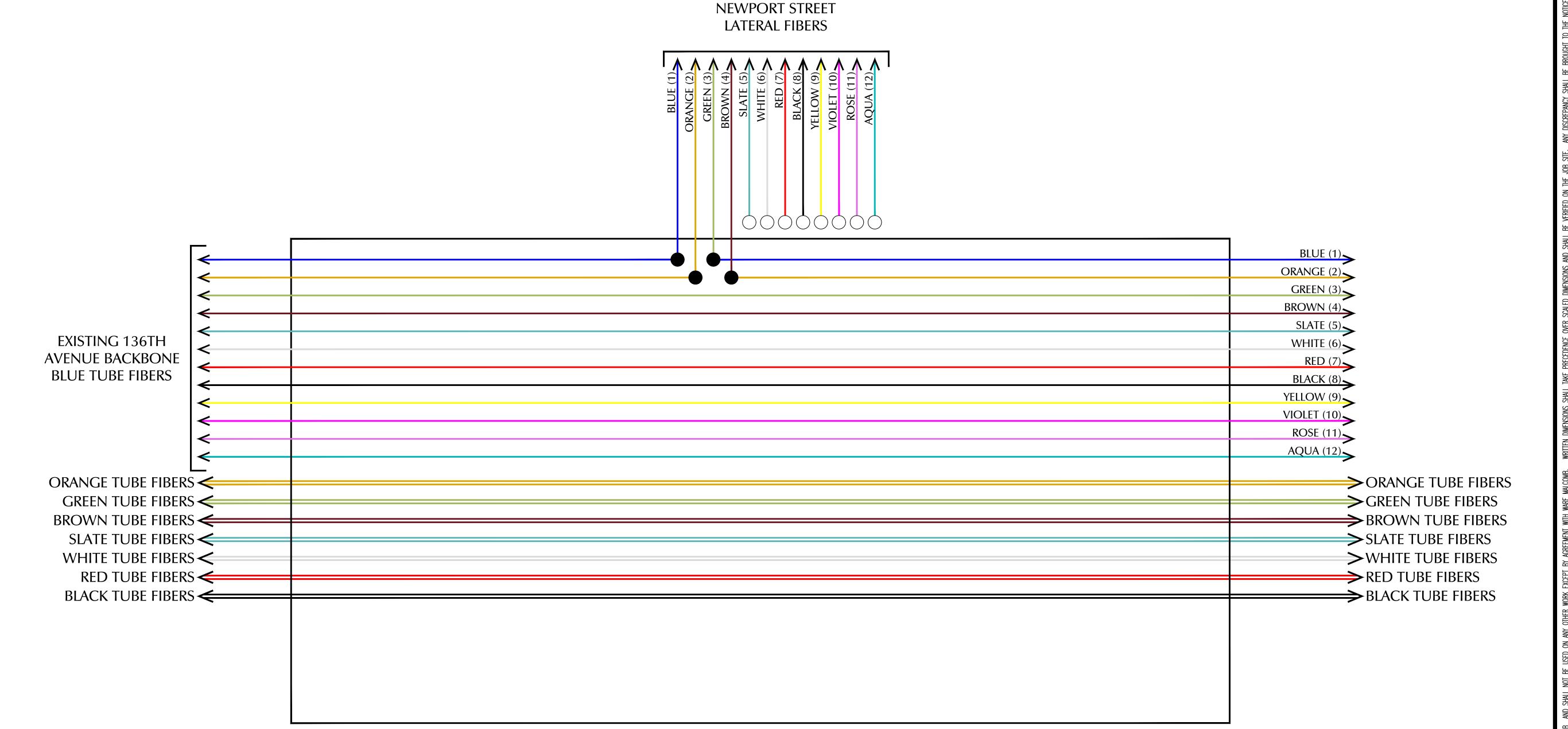
* These items will be Furnished by the City and Installed by the Contractor. They are shown here as Furnish and Install to fully capture the cost to the City in the cost estimate.

ANYTHINK AYL

		_
	JOB NO.:	220910
ı	PA / PM:	CSM
ı	DRAWN BY:	SMR
ı	DATE:	10/6/2022

TS2





NOTES:

EXISTING SPLICES SHALL REMAIN

IN-PLACE AND BE PROTECTED.

INDICATES FIBERS SPLICED OR LANDEDINDICATES FIBERS NOT LANDED



ANYTHINK AYLOR LIBRARY

E. 136thAvenue/Newport Street

WARE

Fiber Optic Splicing Diagram

VO. DATE Response to Comments

EV2 4/18/23 Response to Comments

EV3 6/16/23 Response to Comments

JOB NO.:	220910
PA / PM:	CSM
DRAWN BY:	SMR
DATE:	10/6/2022

TS3

Sheet 37 of 41

GENERAL NOTES:

1.	ALL FEEDERS AND TERMINATIC SHALL BE COPPER 75 DEGREE RATED.
٦	EEEDED I ENOTHS ABE INDICAT

FEEDER LENGTHS ARE INDICATED FOR CALCULATION PURPOSES ONLY. THIS DRAWING IS NOT TO SCALE, FEEDERS LENGTHS MUST BE CONFIRMED WITH THE CONTRACTOR.

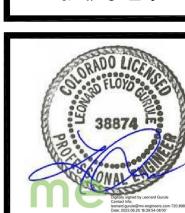
> PROVIDE FULL BUSSING FOR ALL SPACES INDICATED ON PANEL BOARDS AND DISTRIBUTION BOARDS.

REFER TO FEEDER TABLE FOR FEEDER SIZE CORRESPONDING TO OVERCURRENT PROTECTION DEVICE (BREAKER OR FUSE) SHOWN ON ONE-LINE.

ALL EQUIPMENT TO BE FULLY RATED FOR THE AVAILABLE

REFER TO DETAIL A ON SHEET ES FOR PANELBOARD NAMEPLATE DETAIL.

WARE



FOR AND ON BEHALF

OF WARE MALCOMB

PHASI

INFRASTRU

MENT

LIBRARY

OR

ANYTHINK

1 EXISTING UNITED POWER TRANSFORMER.

KEYNOTES:

2 REFER TO DETAIL D/E3. 3 REFER TO DETAIL E/E3.

PAD MOUNTED METER TRANSFORMER ~30A/2P, 120/240 SIGNAL LIGHT CONTROLLER 1PH, 20A FUSE SERVICE DISC. 7200-120/240, 1PH NEMA-3R (3#10,1#10G) 2"C UNITED POWER METERING 208Y/120V NEMA 3R (3#10) 1"C → TO UNITED POWER PRIMARY DISTRIBUTION —UNITED POWER METER 60A/2P, 120/240 --60A/2P, 120/240 1PH, 60A MAIN 1PH, 60A FUSE BREAKER PANEL AND SERVICE DISC. LIGHTING CONTROL NEMA-3R **ENCLOSURE** NEMA-3R (3#4) 1"C

─UNITED POWER

EXISTING

FEEDERS STARTING WITH "FD" CONTAIN DOUBLE NEUTRAL

ME FEEDER TABLE

BKR/OCPD TAG SETS FEEDER/PIPE [3W]

F40 1 F50 1

F80 1

F90 1

F150 1

125 F125 1

F200

F250

F300

F400

F400B

F500

450 F450

700 F700

F800B

1000 F1000 3

1000 - -

F1200

1200 F1200A 1600 F1600

2000 F2000 2000 F2000A

2500 F2500 7

2500 F2500B 6

3500 F3500A 9

F4000

F3000 8

F3500 10

NO SCALE

1200

225 F225 1

110 F110 1 (3#2,#6G) 1-1/2"C

F30 1 (3#10,#10G) 3/4"C

(3#12,#12G) 3/4"C

(3#8,#10G) 3/4"C

(3#8,#10G) 3/4"C

(3#4,#8G) 1-1/4"C

(3#4,#8G) 1-1/4"C

(3#3,#8G) 1-1/4"C

(3#3,#8G) 1-1/4"C

(3#1,#6G) 1-1/2"C

(3#1/0,#6G) 1-1/2"C

(3#2/0,#6G) 2"C

(3#3/0,#6G) 2"C

(3#4/0,#4G) 2-1/2"C

(3#250,#4G) 2-1/2"C

(3#350,#4G) 3"C

(3#500,#3G) 3"C

(3#3/0,#3G) 2"C

(3#600,#3G) 4"C

(3#4/0,#2G) 2-1/2"C

(3#250,#2G) 2-1/2"C

(3#350,#1G) 3"C

(3#500,#1/0G) 3"C

(3#500,#1/0G) 3"C

(3#300,#1/0G) 3"C

(3#400,#2/0G) 3"C

(3#350,#3/0G) 3"C

(3#400,#250G) 3"C

(3#600,#250G) 4"C

(3#500,#350G) 3-1/2"C

(3#600.#350G) 4"C

(3#500,#400G) 3-1/2"C

(3#500,#500G) 3-1/2"C

(3#600,#500G) 4"C

(3#500,#500G) 4"C

ALL EMERGENCY FEEDERS TO BE COPPER CONDUCTORS.

ALL CONDUCTORS ARE WITH THHN/THWN WIRE WITH 75DEG TERMINATIONS.

ALL ALUMINUM FEEDERS TO UTILIZE COMPRESSION TERMINATIONS.

ALL ALUMINUM FEEDERS SHALL INCLUDE COPPER EQUIPMENT GROUND CONDUCTORS.

(3#600,#3/0G) 3-1/2"C

5 (3#400,#4/0G) 3"C

1600 F1600B 4 (3#600,#4/0G) 3-1/2"C

4000 F4000A 10 (3#600,#500G) 4"C

2 (3#600,#1/0G) 3-1/2"C

ALUMINUM

FEEDER/PIPE [3W]

(3#1,#6G) 1-1/2"C

(3#1/0,#6G) 1-1/2"C

(3#3/0,#4G) 2"C

(3#3/0,#4G) 2"C

(3#4/0,#4G) 2"C

(3#250,#6G) 2-1/2"C

(3#300,#4G) 2-1/2"C

(3#350,#4G) 2-1/2"C

(3#500,#4G) 3"C

(3#700,#3G) 3-1/2"C

(3#250,#2G) 2-1/2"C

(3#300,#2G) 2-1/2"C

(3#350,#2G) 2-1/2"C

(3#500,#1G) 3"C

(3#700,#1/0G) 3-1/2"C

(3#700,#1/0G) 3-1/2"C

(3#600,#2/0G) 3"C

(3#500,#3/0G) 3"(

(3#600,#4/0G) 3-1/2"C

(3#700,#350G) 3-1/2"C

(3#700,#400G) 3-1/2"C

(3#700,#500G) 4"C

(3#700,#500G) 4"C

ALL FEEDERS AND BRANCH CIRCUITS TO MECHANICAL AND VIBRATING EQUIPMENT SHALL BE COPPER CONDUCTORS

ALUMINUM

FEEDER/PIPE [4W]

(4#1,#6G) 2"C

(4#1,#4G) 2"C

(5#1,#4G) 2"C

(4#3/0,#4G) 2"C

(4#3/0,#4G) 2"C

(4#4/0,#4G) 2"C

(4#250,#6G) 2-1/2"C

(4#300,#4G) 2-1/2"C

(4#350,#4G) 3"0

(4#350,#2G) 3"0

(5#350,#2G) 3"0

(4#500,#4G) 3"0

(4#700,#3G) 3-1/2"C

(4#250,#3G) 2-1/2"C

(4#250,#1/0G) 2-1/2"C

(5#250,#1/0G) 2-1/2"C

(4#300,#2G) 2-1/2"C

(4#350,#2G) 3"C

(4#350 #1/0G) 3"C

(5#350,#1/0G) 3"C

(4#700,#1/0G) 3-1/2"C

(4#400,#1/0G) 3"0

(4#400,#2/0G) 3"C

(4#600,#2/0G) 3-1/2"C

(4#600,#3/0G) 3-1/2"C

(5#600,#3/0G) 3-1/2"C

(4#500,3/0G) 3"C

(4#600,#4/0G) 3-1/2"C

(4#600,#250G) 3-1/2"C

(5#600,#250G) 3-1/2"C

(4#600,#250G) 3-1/2"C

(4#700,#350G) 3-1/2"

(4#700,#500G) 4"C

(4#700,#400G) 4"C

(4#700,#500G) 4"C

(4#700,#500G) 4"C

(4#500,#1G) 3"C

FEEDER/PIPE [4W]

(4#12,#12G) 3/4"C

(4#10,#10G) 3/4"C

(4#8,#10G) 3/4"C

(4#8,#10G) 3/4"C

(4#8,#8G) 1"C

(5#8,#8G) 1"C

(4#6,#8G) 1"C

(4#4,#8G) 1-1/4"C

(4#4,#8G) 1-1/4"C

(4#3,#8G) 1-1/4"C

(4#3,#8G) 1-1/2"C

(4#3,#6G) 1-1/2"C

(5#3,#6G) 1-1/2"C

(4#1,#6G) 2"C

(4#1/0,#6G) 2"C

(4#2/0,#6G) 2"C

(4#3/0,#6G) 2-1/2"C

(4#250,#4G) 3"C

(4#250,#2G) 3"C

(5#250,#2G) 3"C

(4#350,#4G) 3"C

(4#600,#3G) 4"C

(4#250,#2G) 3"C

(4#250,#1/0G) 3"C

(5#250,#1/0G) 3"C

(4#500,#1/0G) 3-1/2"C

(4#300,#1/0G) 3"C

(4#300,#2/0G) 3"C

(4#600,#1/0G) 4"C (5#300,#2/0G) 3"C

(4#400,#2/0G) 3-1/2"C

(5#400,#3/0G) 3-1/2"C

(4#350,#3/0G) 3"C

(4#600.#3/0G) 4"C

(4#400,#4/0G) 3-1/2"C

(4#400,#250G) 3-1/2"C

(4#600,#4/0G) 4"C

(5#400,#250G) 3-1/2"C

(4#400,#250G) 3-1/2"C

(4#500,#350G) 3-1/2"C

(4#600,#250G) 4"C

(4#500,#500G) 4"C

(4#600.#350G) 4"C

(4#500,#400G) 4"C

(4#500,#500G) 4"C

(4#600,#500G) 4"C

(4#500,#500G) 4"C

FN1000A 3 (4#400,#3/0G) 3-1/2"C

FN4000A 10 (4#600,#500G) 4"C

(4#350,#1G) 3"C

(4#500,#3G) 3-1/2"C

(4#3/0,#3G) 2-1/2"C

(4#3/0,#1/0G) 2-1/2"C

(5#3/0,#1/0G) 2-1/2"C

(4#4/0,#2G) 2-1/2"C

(4#4/0,#4G) 2-1/2"C

FN50

FD50A

FN100

FN100A

FN150

FN175

FN200

FN225

FN250

FN250A

FN300

FN350

FN400A

FD400A

FN450

FN500

FN500A

FD500A

FN700

FN800

FN800A

FN800B

FN1000

FD1000A

FN1200

FN1200A

FN1600

FN1600A

FD1600A

FN2000

FN2000A

FN3000

FN3500

FN4000

FN1600B 4

FN2500A 7

FN2500B 6

FN3500A 9

FD100A

FN80 1

FN125 1

FD250A 1

ELECTRICAL ONE-LINE

		ANYTHINK AYLOR LIBRARY		Μ	IE Engin	eers	lnc.				PANEL:	LP		
		240/120		BUS:	60	Amps		Copper			SECTION:	1 OF 1		
		1PHASE,3WIRE+GND	M	AINS:	60	AMP I	MAIN B	KR			LOCATION:			
		10K AIC										NEW PANEL		
NO ⁻	ΓES:	NEMA 3R				OPTIO	NS:				DATE:	06/19/23		
											FED FROM:			
											MOUNTING:			
											ISSUE:			
N	ID	DESCRIPTION	V-A	Р	BKR	СКТ	PH	СКТ	BKR	Р	V-A	DESCRIPTION	ID	N
	L	DRIVEWAY LIGHTING	84	1	20	1	А	2	20	1		SPARE	Р	
	Р	SPARE		1	20	3	В	4	20	1		SPARE	Р	
	Р	SPARE-		1	20	5	Α	6	20	1		SPARE	Р	
	Р	SPARE		1	20	7	В	8	20	1		SPARE	Р	
	Р	SPARE		1	20	9	Α	10	20	1		SPARE	Р	
	Р	SPARE-		1	20	11	В	12	20	1		SPARE	Р	
1	12	LP.xls		11	240	1		1				LP		_
PER	PHASE	VA WITH DOWNSTREAM LOADS	1		LOAD SUMM	IARY WIT	1				i i			
		A - B	TOTAL VA		CATEGORY		CONNEC	CTED	FACTOR		CALC'D V-A	AMPS @ 240/120 VOLTS		
CALC'D 0 - 0		0		L - LIGHTING	<u> </u>	84		125%		105	0			
	ICTD	84 - 0	84		R - RECEPT				100%		0	0		
DO	WNSTR	EAM LOADS			R - RECEPT				50%		0	0		
					M - MOTOR				100%		0	0		
					LRGST MTR				25%		0	0		
					X - MISC				100%		0	0		
		ADDITIONAL NOTES			K - KITCHEN				100%		0	0		
		ADDITIONAL NOTES			E - ELEC HE	AT			100%		0	0		
											0	0		
											U	U		
					TOTAL		84				105	0		
					S - SUBFEED	TO A PAN	EL P-	SPARE B	KR C-SPA	CE				

DRAWN BY: A WILLYOUNARI

ELECTRICAL PANEL SCHEDULES

NO SCALE

