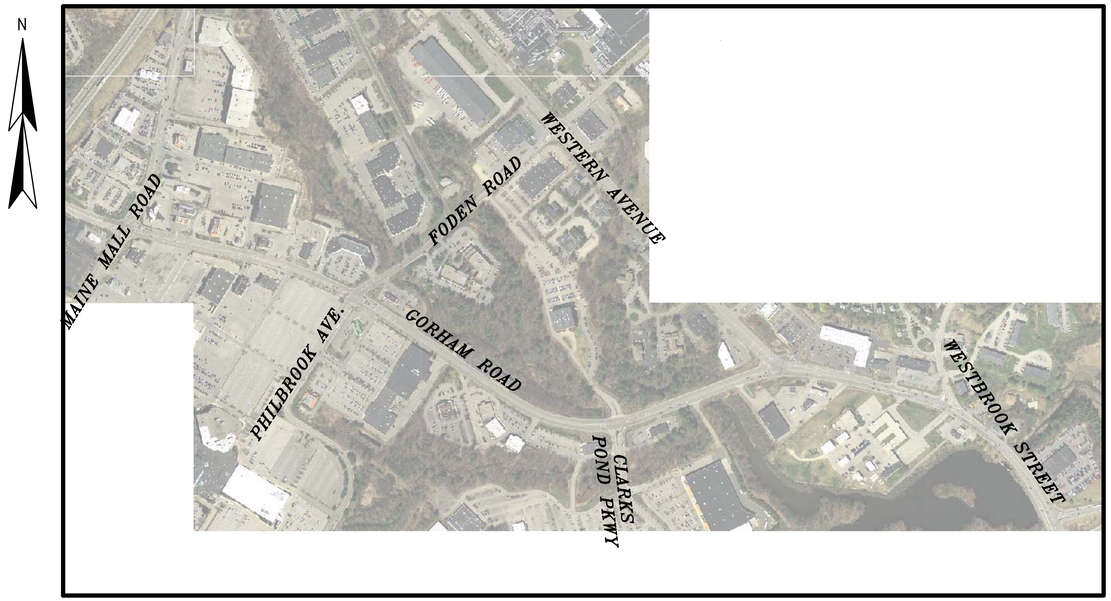
LONG CREEK WATERSHED MANAGEMENT DISTRICT

GORHAM ROAD DRAINAGE IMPROVEMENTS
MARCH 2014

CITY OF SOUTH PORTLAND

NO SCALE



LOCATION MAP

SCALE: 1"=500'

SHEET INDEX:

LONG CREEK WATERSHED MANAGEMENT DISTRICT
35 MAIN STREET
SUITE 3
WINDHAM, MAINE 04062
207-892-4700

City of South Portland
Water Resource Protection
111 Waterman Drive
PO Box 9422
South Portland, ME 04116-9422
Ph # 207-767-7675
Fax # 207-767-5697

STATE OF MAINE ROBERT A. McGORLEY No. 8548 LICENSED PROFESSIONAL ENGINEER

BID SET RAM 03-18-14

WRP PROJECT NO. 038

3/10/2014 5:07:20 PM JHASKELL

EXISTING CONDITIONS NOTES

1. THE LOCATIONS OF UNDERGROUND UTILITIES AND STRUCTURES, AS SHOWN ON THE DRAWINGS, ARE APPROXIMATE AND MAY NOT BE COMPLETE. THE LOCATION OF EXISTING UNDERGROUND UTILITIES ARE BASED ON THE CITY OF SOUTH PORTLAND'S GIS INFORMATION, FIELD INVESTIGATION PERFORMED BY ENGINEER AND INFORMATION PROVIDED BY UTILITY COMPANIES. NO GUARANTEE IS MADE THAT ALL ABOVE OR BELOW GRADE UTILITIES OR STRUCTURES ENCOUNTERED ARE SHOWN ON THE DRAWINGS. ALL LOCATIONS AND SIZES OF EXISTING UTILITIES AND STRUCTURES SHALL BE FIELD VERIFIED WITH TEST PITS, AS REQUIRED, PRIOR TO BEGINNING NEW CONSTRUCTION. THE CONTRACTOR SHALL REALIGN NEW PIPE LOCATIONS AS REQUIRED TO CONFORM TO EXISTING STRUCTURE ELEVATIONS AND AS APPROVED BY THE CITY OF SOUTH PORTLAND'S ENGINEERING DEPARTMENT.
2. UNDERGROUND FACILITIES INDICATED ON THE PROFILE AND CROSS SECTIONS HAVE BEEN CARRIED OVER FROM THE PLAN VIEW DATA AND MAY ALSO INCLUDE FURTHER APPROXIMATIONS OF THE ELEVATIONS (DEPTHS) BASED UPON STRAIGHT LINE INTERPOLATION FROM THE NEAREST MANHOLES, GATE VALVES, OR TEST PITS. THIS INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE ENGINEER HAS COORDINATED THE REQUIRED RELOCATION OF THEIR KNOWN FACILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE HIS WORK AND SCHEDULE WITH THE UTILITY RELOCATION WORK AND THE PROPER UTILITY COMPANY.
3. UTILITY CONTACTS ARE AS FOLLOWS:

   SEWER
   CITY OF SOUTH PORTLAND
   111 WATERMEN DRIVE
   SOUTH PORTLAND, MAINE
   TEL. (207) 767-7675

   PIPE LINE
   BUCKEYE PARTNERS, LP
   130 LINCOLN STREET
   SOUTH PORTLAND, MAINE 04106
   TEL. (207) 741-2404

   TELEPHONE
   FAIRPOINT COMMUNICATIONS
   155 GANNETT DRIVE
   SOUTH PORTLAND, MAINE 04106
   TEL. (207) 797-1678

   WATER
   PORTLAND WATER DISTRICT
   225 DOUGLAS STREET
   PORTLAND MAINE, 04104-3553
   TEL. (207) 774-5961

   CABLE TELEVISION
   TIME WARNER CABLE
   118 JOHNSON ROAD
   PORTLAND, MAINE 04102
   TEL. (207) 253-2291

   ELECTRIC
   CENTRAL MAINE POWER
   162 CANCO ROAD
   PORTLAND, MAINE
   TEL. (207) 791-1022

   GAS
   UNITIL
   1075 FOREST AVENUE
   PORTLAND, MAINE 04103
   TEL. (207) 797-8002

   DIG SAFE
   TEL. 1-800-344-7233

4. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO HAVE ALL THE UTILITIES LOCATE THEIR SERVICES PRIOR TO THE START OF CONSTRUCTION. THE LONG CREEK WATERSHED MANAGEMENT DISTRICT WILL NOT BE RESPONSIBLE FOR DELAYS DUE TO MISSING OR MIS-MARKED LOCATIONS BY OTHERS.
5. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE ALL UTILITY RELOCATIONS WITH THE APPROPRIATE UTILITY COMPANY IN COORDINATION WITH THEIR CONSTRUCTION SCHEDULE. THE LONG CREEK WATERSHED MANAGEMENT DISTRICT WILL NOT BE RESPONSIBLE FOR DELAYS IN THE CONSTRUCTION SCHEDULE DUE TO UTILITY RE-LOCATION DELAYS.
6. SEWER SERVICE LOCATIONS, IF SHOWN, ARE APPROXIMATE AND ARE BASED ON CITY RECORDS. ACTUAL LOCATIONS SHALL BE FIELD VERIFIED BY THE CONTRACTOR.
7. WATER SERVICES, IF SHOWN, ARE APPROXIMATE AND ARE BASED ON FIELD PAINT MARKS OR PORTLAND WATER DISTRICT. ACTUAL LOCATIONS SHALL BE FIELD VERIFIED BY THE CONTRACTOR.
8. SHOULD THE PRESENCE OF ASBESTOS CEMENT PIPE BE DISCOVERED, THE CONTRACTOR SHALL NOTIFY THE CITY OF SOUTH PORTLAND IMMEDIATELY. DISPOSAL OF ASBESTOS SHALL BE IN ACCORDANCE WITH ALL STATE AND LOCAL REGULATIONS.
9. TOPOGRAPHIC INFORMATION PROVIDED BY THE CITY OF SOUTH PORTLAND GIS INFORMATION. COORDINATES ARE IN MAINE STATE PLANE GRID COORDINATES SYSTEM (NAD 83) WEST ZONE. THE VERTICAL DATUM IS BASED ON NAVD 83.
10. THE CONTRACTOR SHALL CONFIRM ELEVATIONS OF EXISTING STRUCTURES THAT ARE TO BE TIED INTO PRIOR TO CONSTRUCTION, ANY DISCREPANCIES SHALL BE REPORTED TO THE CITY OF SOUTH PORTLAND IMMEDIATELY. VERTICAL CONTROL POINTS AND ELEVATIONS ON THE DRAWINGS ARE FOR DESIGN PURPOSES ONLY. ANY EXISTING PROPERTY MONUMENTS DISTURBED BY CONSTRUCTION ACTIVITIES SHALL BE RE-STABLISHED BY A PROFESSIONAL LAND SURVEYOR REGISTERED IN THE STATE OF MAINE, AT NO ADDITIONAL COST TO THE CITY OF SOUTH PORTLAND.
11. CONTRACTOR SHALL NOT PARK, IMPEDE ACCESS, OR STORE EQUIPMENT/MATERIAL ON ADJACENT CITY OR PRIVATELY OWNED LAND WITHOUT WRITTEN CONSENT FROM THE CITY OR LAND OWNER.
12. EXISTING PAVEMENT SHALL BE SAW CUT AND BUTTED TO THE NEW PAVEMENT. NO FEATHERING OF PAVEMENT WILL BE PERMITTED.
13. CONTRACTORS SHALL BE RESPONSIBLE FOR COMPLIANCE WITH THE REQUIREMENTS OF 23 MRSA 3360-A. IT SHALL BY THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE WITH THE APPROPRIATE UTILITIES TO OBTAIN AUTHORIZATION PRIOR TO RELOCATION OF ANY EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THESE PLANS. IF A UTILITY CONFLICT ARISES, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER, THE MUNICIPALITY AND APPROPRIATE UTILITY COMPANY PRIOR TO PROCEEDING WITH ANY RELOCATION.
14. THE CONTRACTOR SHALL CALL THE APPROPRIATE UTILITY COMPANY AND DIG SAFE (1-888-344-7233) AT LEAST 72 HOURS PRIOR TO ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. CONTRACTOR SHALL BE AWARE THAT DIG SAFE ONLY NOTIFIES ITS "MEMBER" UTILITIES ABOUT THE DIG. WHEN NOTIFIED, DIG SAFE WILL ADVISE CONTRACTOR OF MEMBER UTILITIES IN THE AREA. CONTRACTOR IS RESPONSIBLE FOR IDENTIFYING AND CONTACTING NON-MEMBER UTILITIES DIRECTLY. NON-MEMBER UTILITIES MAY INCLUDE TOWN OR CITY WATER AND SEWER DISTRICTS AND SMALL LOCAL UTILITIES, AS WELL AS USG PUBLIC WORKS SYSTEMS.
15. CONTRACTOR SHALL VISIT THE SITE AND FAMILIARIZE HIM OR HERSELF WITH ALL CONDITIONS AFFECTING THE PROPOSED WORK AND SHALL MAKE PROVISIONS AS TO THE COST THEREOF. CONTRACTOR SHALL BE RESPONSIBLE FOR FAMILIARIZING HIM OR HERSELF WITH ALL CONTRACT DOCUMENTS, FIELD CONDITIONS AND DIMENSIONS AND CONFIRMING THAT THE WORK MAY BE ACCOMPLISHED AS SHOWN PRIOR TO PROCEEDING WITH CONSTRUCTION. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO THE COMMENCEMENT OF WORK.
16. PROPERTY MARKERS AND STREET LINE MONUMENTS SHALL BE PROPERLY PROTECTED AND SHALL NOT BE DISTURBED. IF DISTURBED THEY SHALL BE REPLACED BY A LICENSED SURVEYOR AT THE CONTRACTOR'S EXPENSE.

GENERAL PIPING NOTES

1. ALL PIPE LINES SHALL SLOPE UNIFORMLY BETWEEN ELEVATIONS INDICATED ON THE DRAWINGS. NO CRESTS OR SAGS IN THE PIPING WILL BE PERMITTED.
2. WHERE NEW PIPING IS TO BE CONNECTED TO EXISTING PIPING THE CONTRACTOR SHALL FURNISH AND INSTALL ALL ADAPTERS, FITTINGS AND ADDITIONAL PIPE AS REQUIRED TO ENSURE A COMPLETE AND PROPERLY FUNCTIONING CONNECTION. CONTRACTOR TO VERIFY LOCATION, ELEVATION, ORIENTATION AND MATERIAL OF CONSTRUCTION.
3. OPEN TRENCHES IN THE ROADWAY MUST BE BACKFILLED AT THE END OF EACH WORK DAY. OPEN TRENCHES OUTSIDE OF THE ROADWAY MAY BE LEFT OPEN PROVIDED THE CONTRACTOR PROVIDES ADEQUATE SAFETY BARRICADES AND LIGHTING TO SECURE THE AREA MEETING ALL REGULATORY AGENCIES REQUIREMENTS.
4. ALL BASE PAVEMENT HOT MIX ASPHALT 19.0MM IS INCIDENTAL TO THE PIPE ITEMS FOR TRENCH REPAIR OR THE PARTIAL DEPTH AND FULL DEPTH PAVEMENT RECONSTRUCTION ITEMS.
5. FINISHED PAVEMENT 1.5" HOT BITUMINOUS PAVEMENT 9.5MM IS INCIDENTAL TO THE COST OF THE PIPE IN AREAS THAT DO NOT RECEIVE FULL WIDTH STREET OVERLAY. IN AREAS THAT RECEIVE FULL WIDTH OVERLAY, FINISH PAVEMENT SHALL BE PAID UNDER ITEM 403.21.
6. THERE WILL BE NO ADDITIONAL PAYMENT FOR TRENCH SUPPORT OR DEWATERING FOR OVERDEPTH EXCAVATION.
7. GRANULAR BORROW BACKFILL SHALL BE PLACED IN HORIZONTAL LIFTS AND COMPACTED 95 PERCENT OF ITS MAXIMUM DRY DENSITY.

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GENERAL CONSTRUCTION NOTES

1. THE CONTRACTOR SHALL NOTIFY RESIDENTS 48 HOURS IN ADVANCE OF WHEN CONSTRUCTION WILL BE OCCURRING IN PROXIMITY TO THEIR RESIDENCE OR BUSINESS.
2. FLOWS FROM DEWATERING ACTIVITIES SHALL NOT BE DISCHARGED INTO SANITARY SEWERS.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE APPROPRIATE DISPOSAL OF FLOWS RESULTING FROM PRECIPITATION AND THEIR DEWATERING OPERATION AND ACTIVITIES. REFER TO THE EROSION CONTROL NOTES FOR INSTALLATION OF EROSION AND SEDIMENTATION CONTROL MEASURES.
4. ALL TEST PITS SHALL BE EXCAVATED PRIOR TO CONSTRUCTION, LOCATIONS TO BE DETERMINED BY THE LONG CREEK WATERSHED MANAGEMENT DISTRICT. ACTUAL LOCATIONS AND ELEVATIONS OF SUBSURFACE UTILITIES SHALL BE REPORTED TO THE CITY OF SOUTH PORTLAND ENGINEERING DIVISION SO APPROPRIATE MINOR ADJUSTMENTS TO THE ALIGNMENT OR ELEVATIONS CAN BE MADE TO ACCOMMODATE EXISTING UTILITIES. ALL SUCH ADJUSTMENTS, EITHER HORIZONTAL OR VERTICAL, SHALL BE RECORDED AND PROVIDED TO BE INCLUDED IN THE RECORD DRAWINGS FOR THE COMPLETED PROJECT.
5. ANY EXISTING UTILITIES, INCLUDING BUT NOT LIMITED TO, SEWER MAINS, STORM DRAINS, WATER MAINS, LATERALS, SERVICES, AND CULVERTS DAMAGED DURING CONSTRUCTION, THAT IS NOT INTENDED TO BE REPLACED, SHALL BE REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE CITY OF SOUTH PORTLAND.
6. ALL STRUCTURES, PIPELINES AND CURBS LOCATED ADJACENT TO THE TRENCH EXCAVATION SHALL BE PROTECTED AND FIRMLY SUPPORTED BY THE CONTRACTOR, UNTIL THE TRENCH IS BACKFILLED. DAMAGE TO ANY STRUCTURES, PIPELINES AND CURBS CAUSED BY, OR RESULTING FROM, THE CONTRACTORS OPERATIONS OR ACTIVITIES SHALL BE REPAIRED AT THE CONTRACTORS EXPENSE. THE COST OF EXCAVATION SUPPORT AND SUPPORTING EXISTING UTILITIES IN AND ADJACENT TO THE TRENCH IS INCIDENTAL TO THE WORK AND NO SEPARATE PAYMENT WILL BE MADE.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING AND DISPOSING OF ALL DEMOLISHED PIPING, STRUCTURES, EQUIPMENT AND MATERIALS IN ACCORDANCE WITH ALL STATE AND LOCAL REGULATIONS. THE CITY OF SOUTH PORTLAND RESERVES THE RIGHT TO RETAIN ANY SUCH PIPING, STRUCTURES, EQUIPMENT AND MATERIALS FOR THEIR USE. SUCH ITEMS TO BE RETAINED SHALL BE PROPERLY STORED IN AN ON-SITE LOCATION. CONTRACTOR TO COORDINATE ITEMS TO BE SALVAGED WITH THE CITY OF SOUTH PORTLAND PRIOR TO BEGINNING DEMOLITION OR CONSTRUCTION ACTIVITIES.
8. ALL EXISTING CATCH BASIN FRAMES AND GRATES SALVAGED FROM THE DEMOLITION OF EXISTING STRUCTURES SHALL BE RETAINED FOR RE-USE ON NEW STRUCTURES.
9. THE LOCATION AND LIMITS OF ALL ON-SITE WORK AND STORAGE AREAS SHALL BE REVIEWED, COORDINATED WITH AND APPROVED BY THE CITY OF SOUTH PORTLAND. THE CONTRACTOR SHALL LIMIT THEIR ACTIVITIES TO THESE AREAS.
10. THE CONTRACTOR SHALL TAKE ALL NECESSARY STEPS TO ENSURE THAT ALL EXISTING FLOWS ARE MAINTAINED DURING CONSTRUCTION. GRAVITY OR PUMPED BYPASSES OR OTHER MEANS OF MAINTAINING FLOW SHALL BE SUBJECT TO THE APPROVAL OF THE CITY OF SOUTH PORTLAND. THE CONTRACTOR SHALL COORDINATE ANY TEMPORARY STOPPAGES OR BYPASSES WITH THE CITY OF SOUTH PORTLAND.
11. DO NOT SCALE DRAWINGS UNLESS OTHERWISE NOTED. WRITTEN DIMENSIONS AND STATIONING SHALL PREVAIL. REPORT ANY DISCREPANCIES IMMEDIATELY TO THE CITY OF SOUTH PORTLAND ENGINEERING DIVISION.
12. THE CONTRACTOR SHALL SUBMIT A TRAFFIC CONTROL PLAN TO THE LONG CREEK WATERSHED MANAGEMENT DISTRICT AND THE CITY OF SOUTH PORTLAND. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING TRAFFIC FLOW AT ALL TIMES. THE CITY OF SOUTH PORTLAND'S POLICE AND FIRE DEPARTMENTS SHALL BE NOTIFIED AT LEAST ONE WEEK IN ADVANCE OF ANY WORK WITHIN THE RIGHTS-OF-WAY. THE CONTRACTOR IS RESPONSIBLE TO INSTALL AND MAINTAIN TRAFFIC CONTROL DEVICES IN ACCORDANCE WITH THE ACCEPTED PLAN (MDOT AND THE CITY OF SOUTH PORTLAND) REQUIREMENTS. THE CITY OF SOUTH PORTLAND'S POLICE AND FIRE DEPARTMENTS SHALL BE NOTIFIED AT LEAST ONE WEEK IN ADVANCE ON ANY WORK WITHIN THE RIGHTS-OF-WAY. REFER TO THE SPECIAL PROVISIONS IN THE CONTRACT DOCUMENTS FOR ADDITIONAL INFORMATION.
13. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING ANY TRENCH PAVEMENT THAT HAS EXPERIENCED EXCESSIVE SETTLEMENT, CRACKING, OR OPENING OF JOINTS. REPAIRS MAY INCLUDE OVERLAY, REMOVAL OF WORK MAY BE NECESSARY AFTER THE FINAL ACCEPTANCE OF WORK OR PRIOR TO THE END OF THE CITY OF SOUTH PORTLAND STREET OPENING ORDINANCE WARRANTY PERIOD. THIS WORK SHALL BE DONE AT THE CONTRACTOR'S EXPENSE.
14. EXCAVATIONS ACCOMPLISHED AS PART OF THIS PROJECT SHALL BE CONSTRUCTED IN ACCORDANCE WITH SUBPART P OF 29 CRF PART 1926.650-.652 (CONSTRUCTION STANDARD FOR EXCAVATIONS).
15. ALL STRIPING MATERIALS AND PLACEMENT SHALL CONFORM TO THE MAINE DOT STANDARD SPECIFICATIONS, SUPPLEMENTAL SPECIFICATIONS AND STANDARD DETAILS AND WITH THE FEDERAL HIGHWAY ADMINISTRATION "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES".

GENERAL GRADING NOTES

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PREVENTION OF EROSION. ALL DISTURBED EARTH SURFACES SHALL BE STABILIZED IN THE SHORTEST PRACTICAL TIME AND TEMPORARY EROSION CONTROL DEVICES EMPLOYED UNTIL SUCH TIME AS ADEQUATE SOIL STABILIZATION HAS BEEN ACHIEVED. TEMPORARY STORAGE OF EXCAVATED MATERIAL SHALL BE IN A MANNER THAT WILL MINIMIZE EROSION. MATERIALS AND METHODS USED FOR TEMPORARY EROSION CONTROL SHALL BE AS SPECIFIED BY THE "MAINE EROSION AND SEDIMENT CONTROL BMP'S" AS AMENDED, PREPARED BY THE STATE OF MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION. REFER TO EROSION CONTROL DRAWINGS FOR INSTALLATION OF EROSION AND SEDIMENTATION CONTROL MEASURES.
2. ALL AREAS THAT ARE EXCAVATED, FILLED OR OTHERWISE DISTURBED BY THE CONTRACTOR SHALL BE LOAMED, GRADED, LIMED, FERTILIZED, SEEDED AND MULCHED, UNLESS OTHERWISE NOTED ON THE DRAWINGS. THE TOP 6" OF SOIL SHALL BE LOAM.
3. ALL STORM DRAIN INLETS SHALL BE PROTECTED TO PREVENT ENTRY OF SEDIMENT FROM RUNOFF WATERS DURING CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR THE REMOVAL AND DISPOSAL OF ALL COLLECTED SEDIMENT. ALL SEDIMENT COLLECTED WITHIN THE STORM DRAIN SYSTEM AS A RESULT OF CONSTRUCTION ACTIVITIES SHALL BE REMOVED, AND THE AFFECTED STORM DRAIN SYSTEM CLEANED TO THE SATISFACTION OF THE CITY OF SOUTH PORTLAND AT NO ADDITIONAL COST TO THE CITY OF SOUTH PORTLAND.
4. THE CONTRACTOR SHALL CONTROL AND MAINTAIN DUST FROM THE CONSTRUCTION ACTIVITIES. ALLOWABLE DUST LEVELS SHALL BE SUBJECT TO AND DETERMINED BY THE CITY OF SOUTH PORTLAND.
5. THE CONTRACTOR SHALL NOT TRACK OR SPILL EARTH, DEBRIS OR OTHER CONSTRUCTION MATERIAL ON PUBLIC OR PRIVATE STREETS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR IMMEDIATE ASSOCIATED CLEAN UP.
6. ALL CATCH BASINS, MANHOLES, VALVE BOXES AND OTHER BURIED FACILITIES WITH SURFACE ACCESS SHALL BE ADJUSTED TO MATCH FINAL GRADE.
7. THE CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL DEBRIS AND EXCESS EXCAVATED MATERIAL FROM WITHIN THE CONSTRUCTION LIMITS OF WORK, TO A SUITABLE LOCATION PROVIDED BY THE CONTRACTOR IN ACCORDANCE WITH ALL STATE AND LOCAL REGULATIONS. THE CITY OF SOUTH PORTLAND RESERVES THE RIGHT TO RETAIN ANY SUITABLE MATERIAL FOR THEIR USE.
8. THE CONTRACTOR SHALL REMOVE AND REPLACE, OR REPAIR, ALL CURBS, SIDEWALKS, PAVEMENT OR OTHER ITEMS DAMAGED DUE TO THEIR CONSTRUCTION ACTIVITIES TO AT LEAST THEIR ORIGINAL CONDITION AND TO THE SATISFACTION OF THE CITY OF SOUTH PORTLAND.
9. WHERE EXISTING PAVEMENT IS TO BE REMOVED AND REPLACED, NEW PAVEMENT SHALL MATCH THE EXISTING COURSE DEPTHS AND COMPOSITION. REFER TO DETAILS FOR MINIMUM PAVEMENT THICKNESS.
10. EXISTING PAVEMENT SHALL BE SAW CUT AND BUTTED TO THE NEW PAVEMENT. NO FEATHERING OF PAVEMENT WILL BE PERMITTED.

CIVIL ABBREVIATIONS

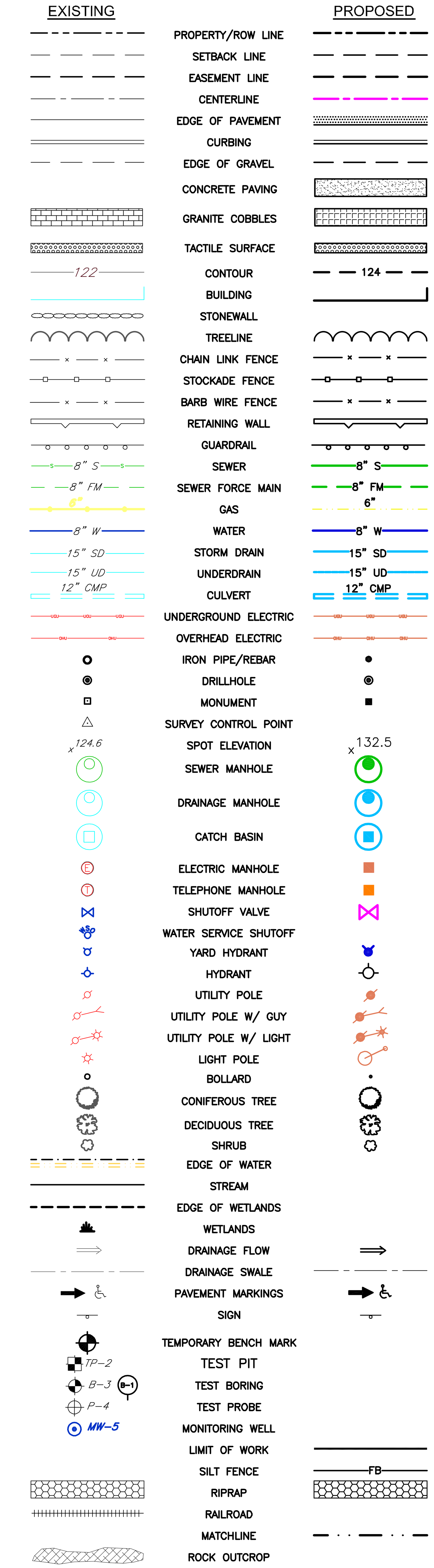
ABAN	ABANDONED	#,NO	NUMBER
BLDG	BUILDING	NTS	NOT TO SCALE
CATV	CABLE TELEVISION	OC	ON CENTER
CB	CATCH BASIN	OD	OUTSIDE DIAMETER
CEN	CENTER	PC	POINT OF CURVATURE
CI	CAST IRON	PCCP	PRECAST CONCRETE CYLINDER PIPE
CMP	CORRUGATED METAL PIPE	PERF	PERFORATED
CO	CLEAN OUT	PSI	POUNDS PER SQUARE INCH
CONC	CONCRETE	PT	POINT OF TANGENCY
COR	CORNER	PVC	POLYVINYL CHLORIDE
CY	CUBIC YARDS	RCP	REINFORCED CONCRETE PIPE
DI	DUCTILE IRON	REQ'D	REQUIRED
ø	DIAMETER	RR	RAIL ROAD
DMH	STORM DRAIN MANHOLE	S	SLOPE
EHH	ELECTRICAL HANDHOLE	SD	STORM DRAIN
EFF	EFFLUENT	SF	SQUARE FOOT
ELEC	ELECTRICAL	SMH	SANITARY MANHOLE
EMH	ELECTRIC MANHOLE	SS	SANITARY SEWER
EX,EXIST	EXISTING	STA	STATION
FM	FORCE MAIN	ST	STREET
FT	FEET	T,XFRMR	TRANSFORMER
G	GAS LINE	TBM	TEMPORARY BENCHMARK
GV	GATE VALVE	THK	THICKNESS
HDPE	HIGH DENSITY POLYETHYLENE	TOC	TOP OF CONCRETE
HYD	HYDRANT	TYP	TYPICAL
ID	INSIDE DIAMETER	UD	UNDERDRAIN
IN	INCH	UG	UNDERGROUND
INF	INFLUENT	UGE	UNDERGROUND ELECTRIC
LBS	POUNDS	UGT	UNDERGROUND TELEPHONE
MAX	MAXIMUM	VC	VITRIFIED CLAY
MIN	MINIMUM	W	POTABLE WATER
MW	MONITORING WELL	W/	WITH
		WV	WATER VALVE
		XING	CROSSING

INCIDENTAL WORK

INCIDENTAL WORK ITEMS FOR WHICH SEPARATE PAYMENT IS NOT MADE INCLUDE (BUT ARE NOT LIMITED TO) THE FOLLOWING ITEMS.

1. CLEARING, GRUBBING AND STRIPING.
2. DEWATERING.
3. CLEAN-UP.
4. RESTORATION OF PROPERTY.
5. CROSSING OTHER UTILITIES.
6. FITTINGS - ALL CROSSES, TEES, BENDS, SLEEVES, ADAPTERS THRUST BLOCKS, RETAINING GLANDS, ETC. REQUIRED FOR A COMPLETE INSTALLATION ARE INCIDENTAL TO THE PIPE ITEMS.
7. BONDS, INSURANCE, SHOP DRAWINGS, WARRANTIES AND OTHER SUBMITTALS REQUIRED BY THE CONTRACT DOCUMENTS.
8. REPAIR AND REPLACEMENT OF UTILITIES DAMAGED BY CONSTRUCTION ACTIVITIES AND CORRESPONDING PROPER DISPOSAL OF REMOVED MATERIALS.
9. TEMPORARY CONSTRUCTION AND OTHER FACILITIES NOT TO BE PERMANENTLY INCORPORATED INTO THE WORK NECESSARY FOR CONSTRUCTION SEQUENCING AND MAINTENANCE OF OPERATIONS.
10. PERMITS NOT OTHERWISE PAID FOR OR PROVIDED BY THE CITY OF SOUTH PORTLAND.
11. FACILITIES FOR THE STORAGE OF MATERIALS TO BE INCORPORATED INTO THE WORK.
12. TEST PITS TO DETERMINE EXISTING UTILITY LOCATIONS, SOIL CONDITIONS, AND AS REQUIRED TO COMPLETE THE PROJECT.
13. REMOVAL OF EXISTING PAVEMENT, CONCRETE, COBBLESTONES AND RAIL TRACKS AND TIES, IF ENCOUNTERED.
14. EXCAVATION SUPPORT, SUPPORT OF EXISTING UTILITIES IN AND ADJACENT TO THE TRENCH.
15. BACKFILLING OF ALL EXCAVATIONS, INCLUDING PROVIDING AND INSTALLING PIPE BEDDING, SPECIAL BACKFILL, GRAVEL BORROW, AND FULL DEPTH TRENCH REPAIR (SUB-BASE AND BASE MATERIAL AND BITUMINOUS PAVEMENT) IS INCIDENTAL TO THE PIPE AND STRUCTURE INSTALLATION AND REMOVAL ITEMS.
16. GRANULAR BORROW AND SELECT FILL FOR BACKFILLING MANHOLES OR CATCH BASINS IS INCIDENTAL TO PIPE AND STRUCTURE ITEMS.
17. DUST CONTROL.
18. PROTECTION OF ALL TREES AND VEGETATION TO REMAIN. TREE TRIMMING, IF REQUIRED TO COMPLETE THE WORK, SHALL BE APPROVED BY THE CITY ARBORIST.

LEGEND



APP'D	DATE	REVISIONS
RAM	08-30-13	95% PLANS SUBMISSION
RAM	09-30-13	95% COMMENTS
RAM	03-18-14	BID SET

DRAWN BY BRF/JRH
APPROVED BY —
DATE —
CHECKED BY RAM
DATE —
PROJECT NO. 13125
SCALE AS NOTED

STATE OF MAINE — ROBERT A. McSORLEY — No. 8589 — LICENSED PROFESSIONAL ENGINEER
03-18-14

LONG CREEK Watershed Management District

LONG CREEK WATERSHED
MANAGEMENT DISTRICT
35 MAIN STREET
SUITE 3
WINDHAM, MAINE 04062
207-892-4700

CITY OF SOUTH PORTLAND
GORHAM ROAD DRAINAGE IMPROVEMENTS
MEDIAN ALTERATIONS
GORHAM RD., WESTERN AVE. & WESTBROOK ST.

GENERAL NOTES & LEGEND

DWG
2

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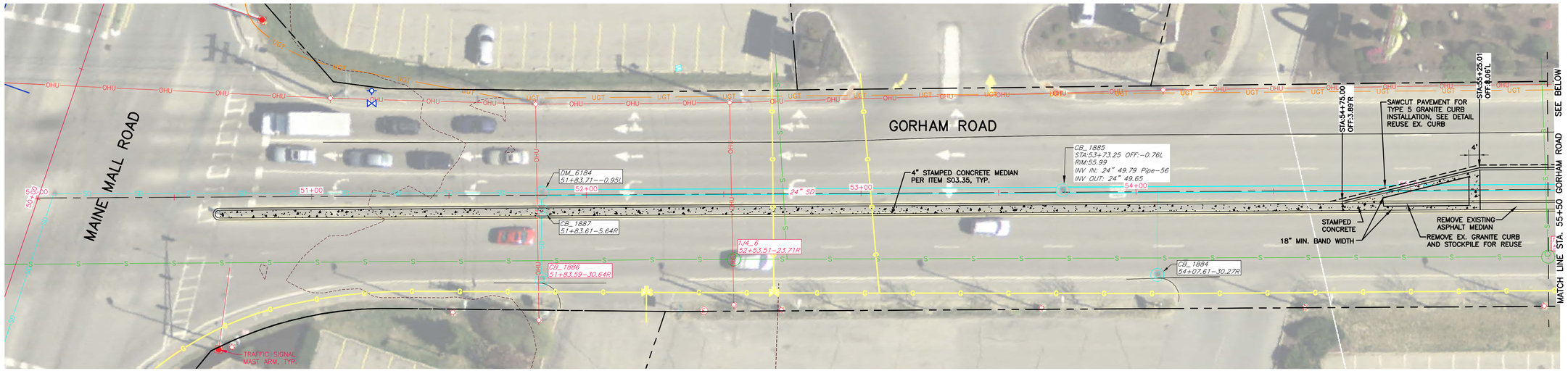
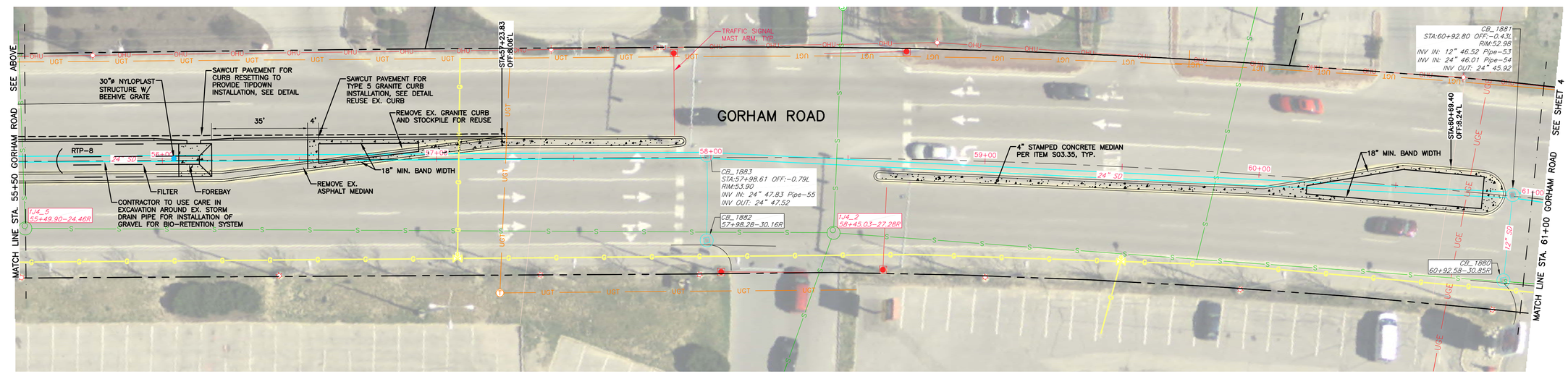


PLAN VIEW
1"=20'



PLAN VIEW
1"=20'

REVISIONS	APP'D	DATE
95% PLANS SUBMISSION	RAM	09-30-13
95% COMMENTS	RAM	09-30-13
BID SET	RAM	03-18-14

DRAWN BY: BRF/JRH
APPROVED BY: --
DATE: --
CHECKED BY: RAM
DATE: --
PROJECT NO. 13125
SCALE: AS NOTED
03-18-14

STATE OF MAINE ROBERT R. MASPLEY No. 9569 REGISTERED PROFESSIONAL ENGINEER

LONG CREEK WATERSHED
MANAGEMENT DISTRICT
35 MAIN STREET
SUITE 3
WINDHAM, MAINE 04062
207-892-4700

LONG CREEK Watershed Management District

CITY OF SOUTH PORTLAND
GORHAM ROAD DRAINAGE IMPROVEMENTS
MEDIAN ALTERATIONS
GORHAM ROAD

LAYOUT PLAN

DWG
3

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PLAN VIEW
1"=20'

PLAN VIEW
1"=20'

REVISIONS	APP'D	DATE
95% PLANS SUBMISSION	RAM	08-30-13
95% COMMENTS	RAM	09-30-13
ADDED LANDSCAPING PLANS & MODIFICATION OF MEDIAN CLOSING	RAM	10-31-13
BID SET	RAM	03-18-14

DRAWN BY: BRF/JRH
APPROVED BY: --
DATE: --
CHECKED BY: RAM
DATE: --
PROJECT NO. 13125
SCALE: AS NOTED
03-18-14

STATE OF MAINE ROBERT M. SPLEET No. 9569 REGISTERED PROFESSIONAL ENGINEER

LONG CREEK WATERSHED MANAGEMENT DISTRICT
35 MAIN STREET
SUITE 3
WINDHAM, MAINE 04062
207-892-4700

LONG CREEK Watershed Management District

CITY OF SOUTH PORTLAND
GORHAM ROAD DRAINAGE IMPROVEMENTS
MEDIAN ALTERATIONS
GORHAM ROAD

LAYOUT PLAN

DWG
4

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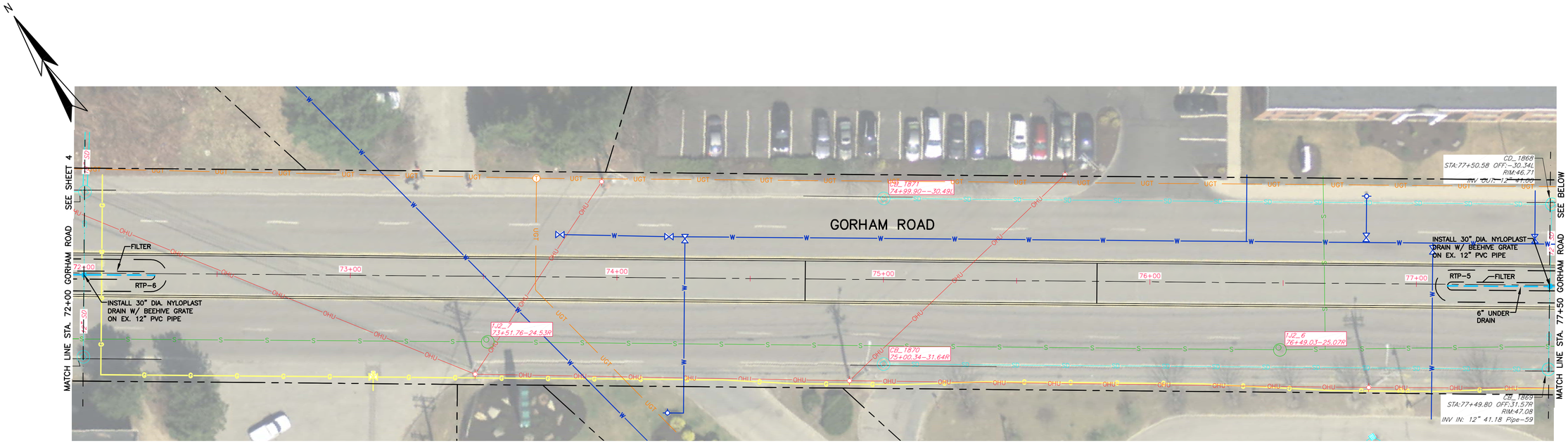
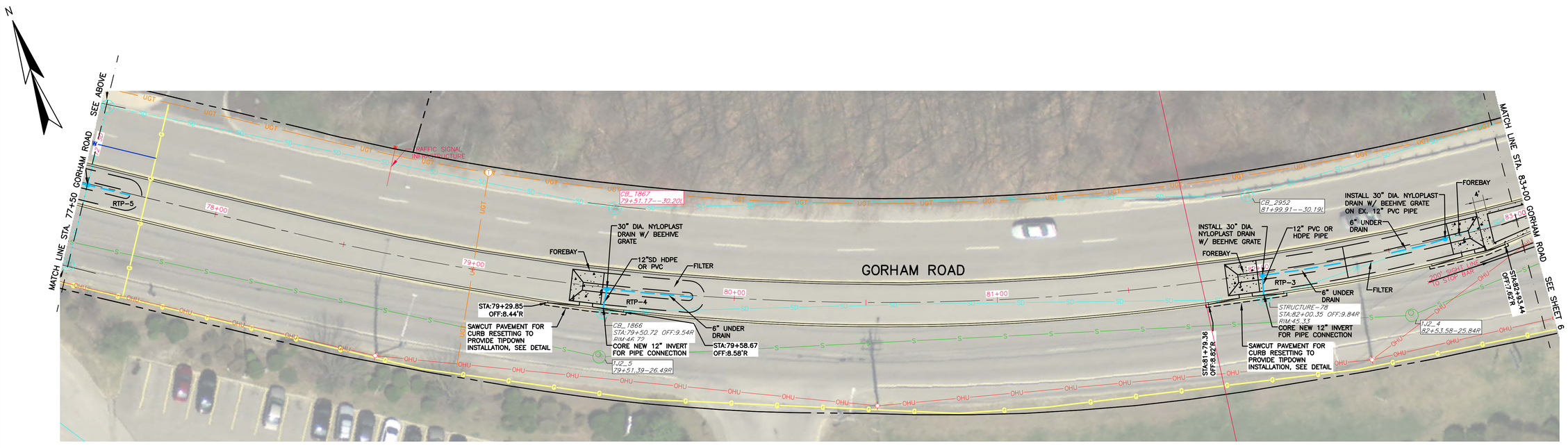


PLAN VIEW
1"=20'



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REVISIONS	APP'D	DATE
95% PLANS SUBMISSION	RAM	08-30-13
95% COMMENTS	RAM	09-30-13
MDOT SITE LINES REVISIONS	RAM	10-04-13
BID SET	RAM	03-18-14

DRAWN BY: BRF/JRH
APPROVED BY: --
DATE: --
CHECKED BY: RAM
DATE: --
PROJECT NO. 13125
SCALE: AS NOTED
03-18-14

STATE OF MAINE · ROBERT R. MASOPUST · No. 9569 · REGISTERED PROFESSIONAL ENGINEER

LONG CREEK WATERSHED MANAGEMENT DISTRICT
35 MAIN STREET
SUITE 3
WINDHAM, MAINE 04062
207-892-4700

LONG CREEK Watershed Management District

CITY OF SOUTH PORTLAND
GORHAM ROAD DRAINAGE IMPROVEMENTS
MEDIAN ALTERATIONS
GORHAM ROAD

LAYOUT PLAN

DWG 5

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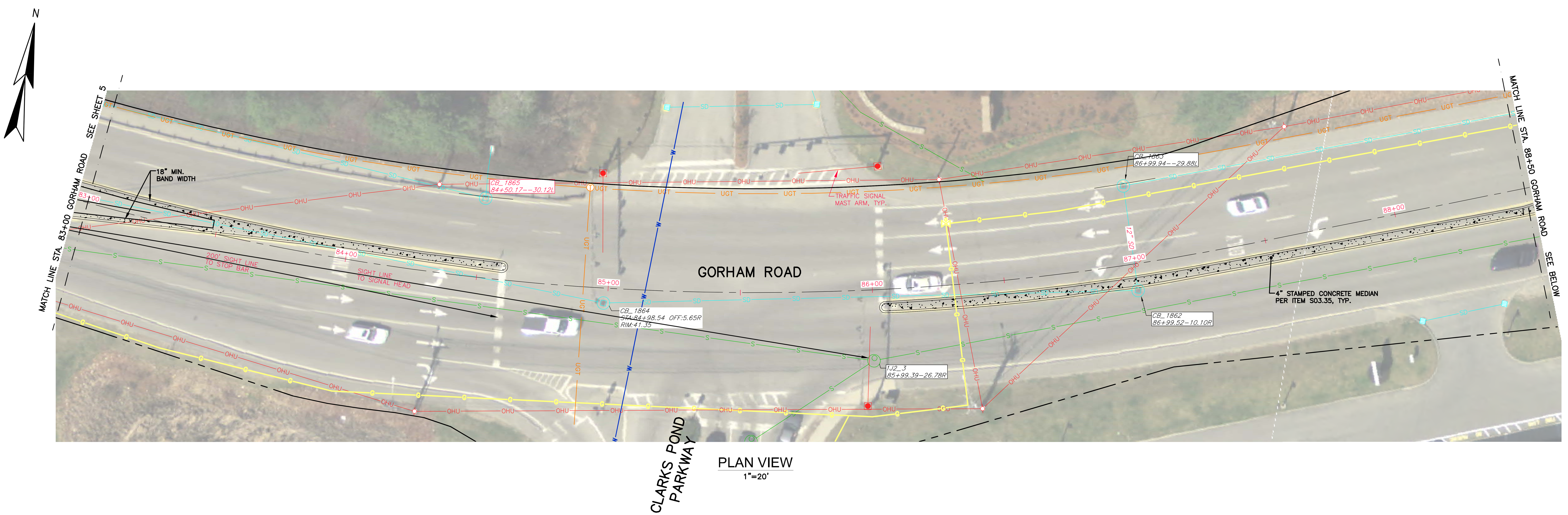

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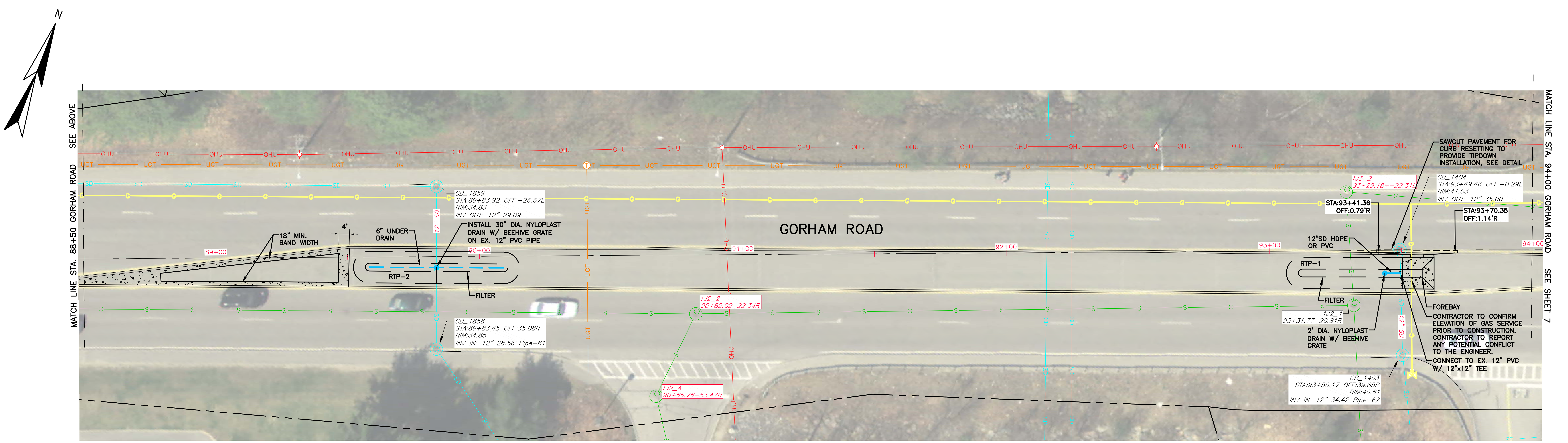

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STATE OF MAINE ROBERT A. McSORLEY LICENSED PROFESSIONAL ENGINEER
03-18-14

LONG CREEK WATERSHED MANAGEMENT DISTRICT
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LONG CREEK Watershed Management District

CITY OF SOUTH PORTLAND
GORHAM ROAD DRAINAGE IMPROVEMENTS
MEDIAN ALTERATIONS
GORHAM ROAD

LAYOUT PLAN

DWG
6

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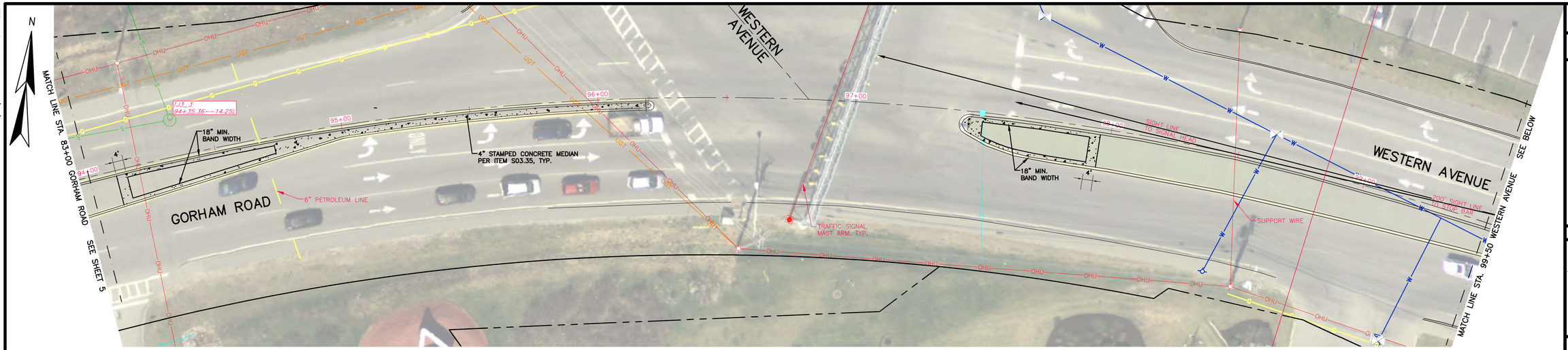

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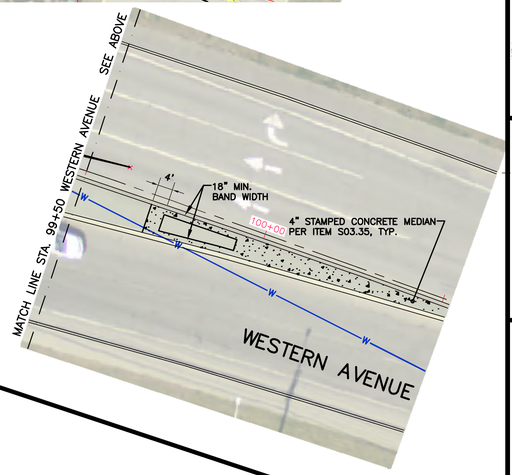

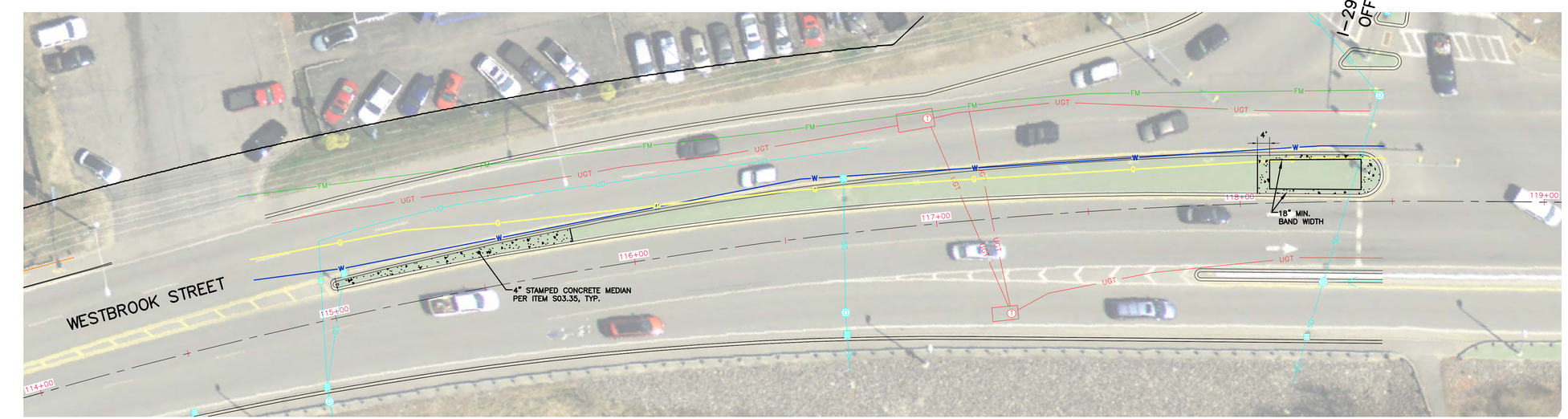

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STATE OF MAINE — ROBERT M. SPOFFORD — No. 9459 — REGISTERED PROFESSIONAL ENGINEER

LONG CREEK WATERSHED MANAGEMENT DISTRICT
35 MAIN STREET
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LONG CREEK Watershed Management District

CITY OF SOUTH PORTLAND
GORHAM ROAD DRAINAGE IMPROVEMENTS
MEDIAN ALTERATIONS
GORHAM RD., WESTERN AVE. & WESTBROOK ST.

LAYOUT PLAN

DWG 7

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PLAN VIEW
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PLAN VIEW
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NOTES:
1. SEE SHEET 12 FOR PLANT LIST

REVISIONS	APP'D	DATE
ADDED LANDSCAPING PLANS & MODIFICATION OF MEDIAN CLOSING	RAM	10-31-13
BID SET	RAM	03-18-14

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STATE OF MAINE — ROBERT M. SOPPELSA — No. 9569 — REGISTERED PROFESSIONAL ENGINEER

LONG CREEK WATERSHED MANAGEMENT DISTRICT
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LONG CREEK Watershed Management District

CITY OF SOUTH PORTLAND
GORHAM ROAD DRAINAGE IMPROVEMENTS
MEDIAN ALTERATIONS
GORHAM ROAD

LANDSCAPE PLAN

DWG 8

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PLAN VIEW
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STATE OF MAINE ROBERT F. MacSPLEDEN No. 9569 REGISTERED PROFESSIONAL ENGINEER

LONG CREEK WATERSHED MANAGEMENT DISTRICT
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LONG CREEK Watershed Management District

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LANDSCAPE PLAN

DWG 9

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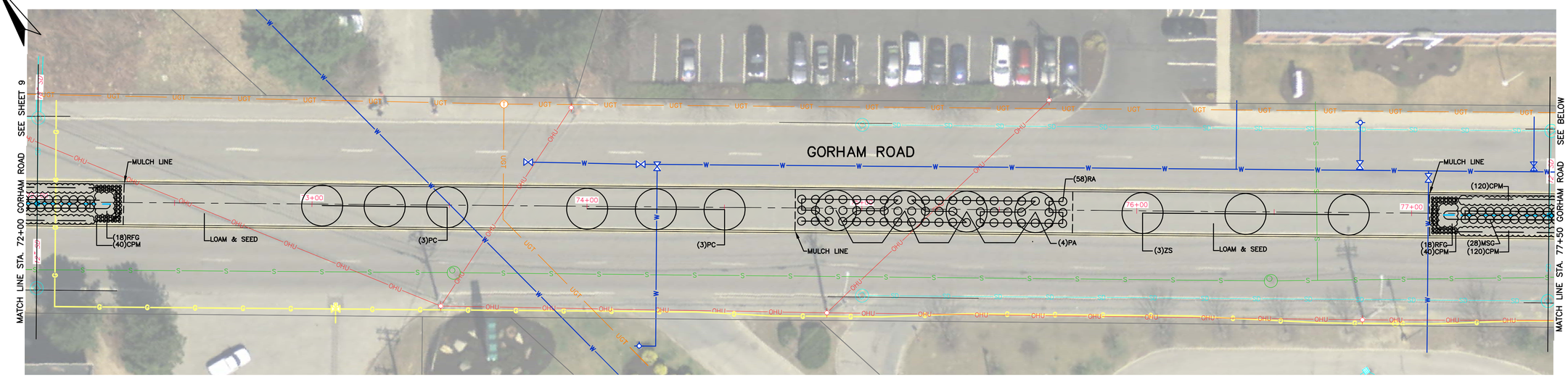

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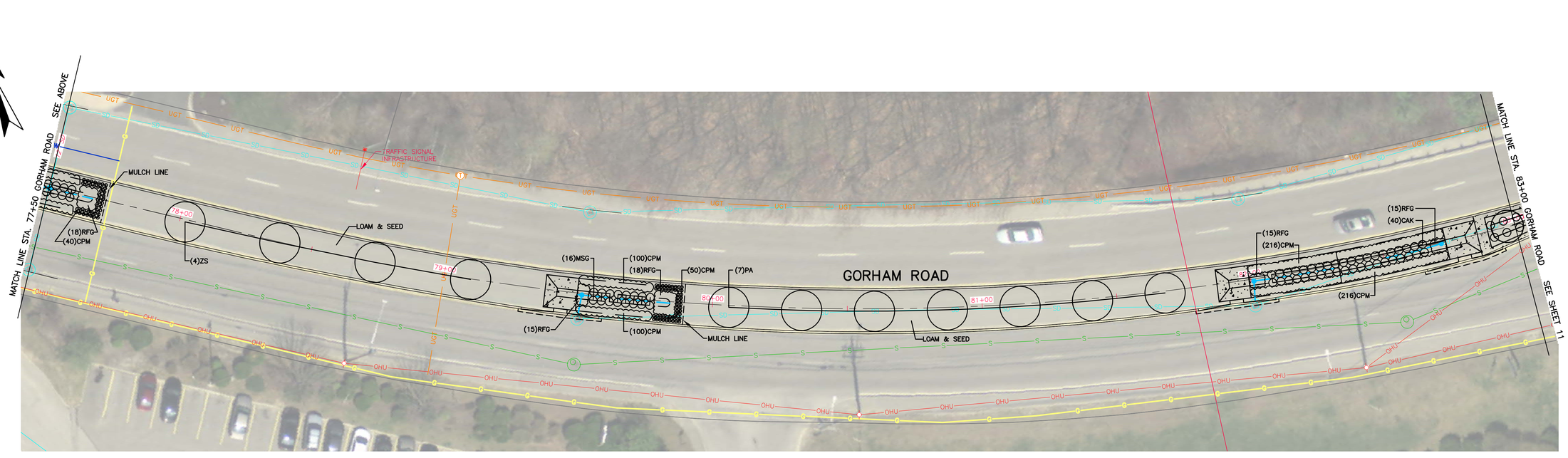

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LANDSCAPE PLAN

DWG 10

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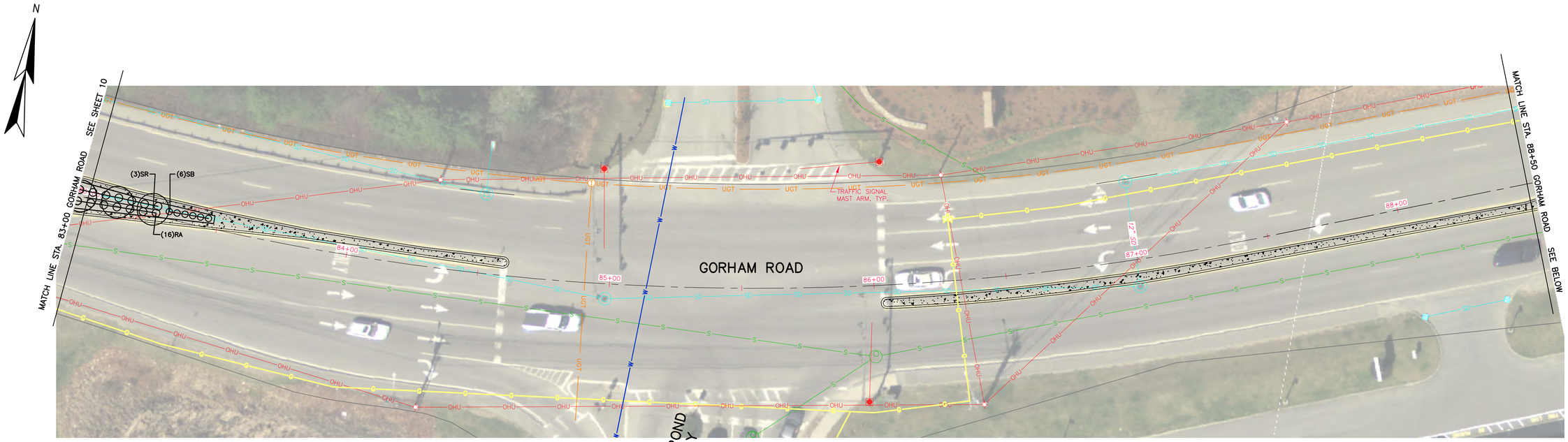

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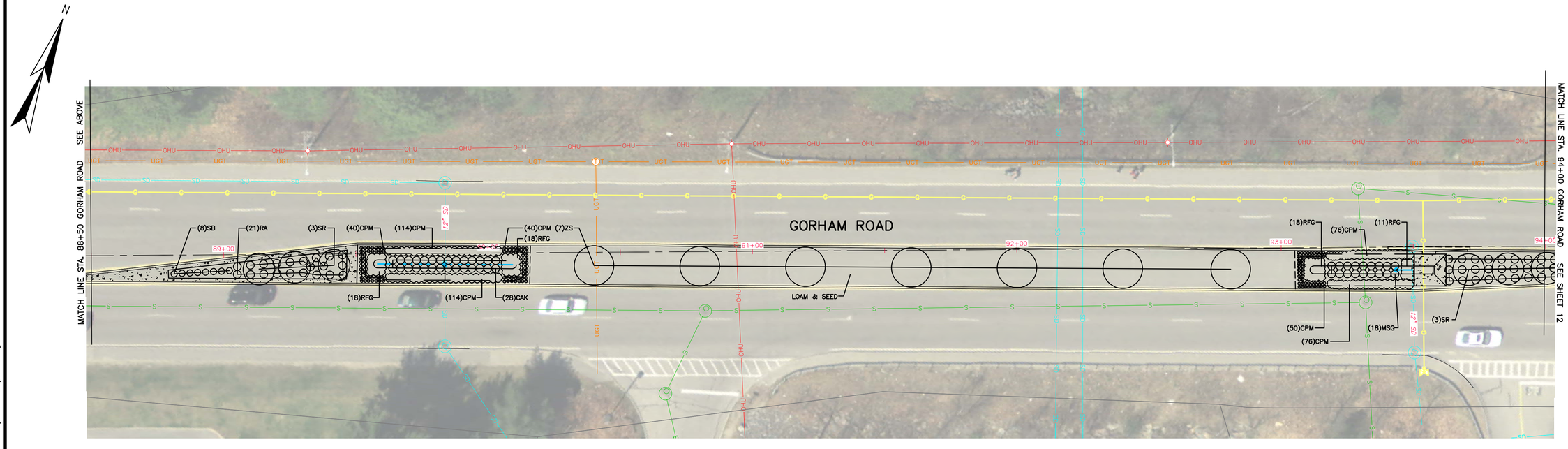

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STATE OF MAINE ROBERT R. MacGREGOR No. 9569 REGISTERED PROFESSIONAL ENGINEER

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LONG CREEK Watershed Management District

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GORHAM ROAD

LANDSCAPE PLAN

DWG 11

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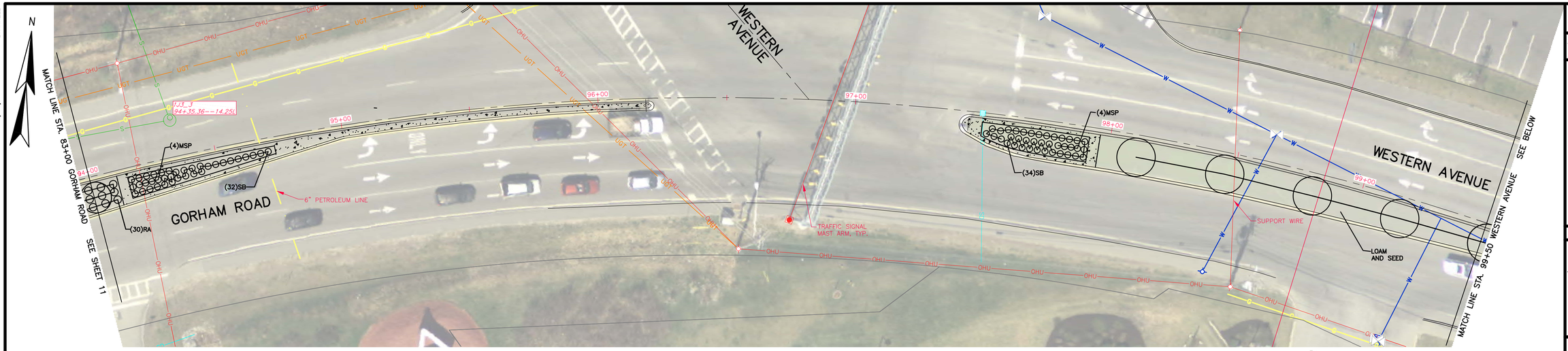
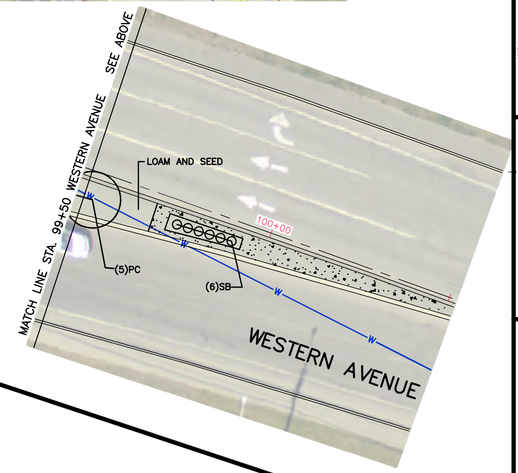
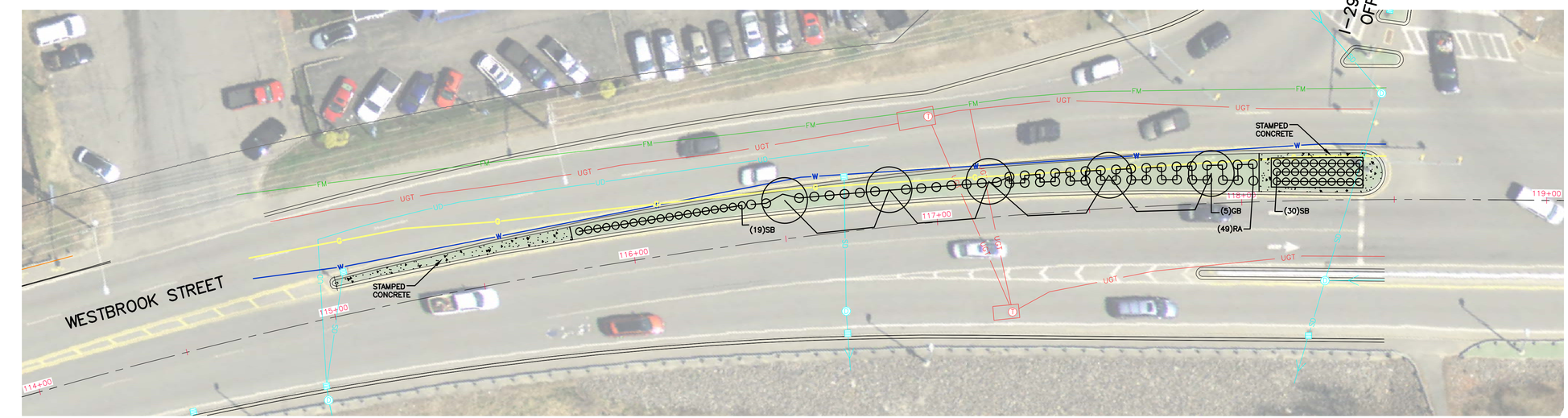


PLAN VIEW
1"=20'

PLANT LIST

QUANTITY	KEY	BOTANICAL NAME	COMMON NAME	SIZE
LARGE DECIDUOUS, 2-1/2" CAL., GROUP A				
6	GB	GINKGO BILOBA 'SARATOGA'	SARATOGA GINKGO	2-1/2" CAL.
14	ZS	ZELKOVA SERRATA 'GREEN VASE'	GREEN VASE ZELKOVA	2-1/2" CAL.
MEDIUM DECIDUOUS, 2-1/2" CAL., GROUP A				
16	PA	PRUNUS X 'ACCOLADE'	ACCOLADE CHERRY	2-1/2" CAL.
11	PC	PYRUS CALLERYANA 'CLEVELAND'	CLEVELAND PEAR	2-1/2" CAL.
15	SR	SYRINGA RETICULATA 'IVORY SILK'	IVORY SILK TREE LILAC	2-1/2" CAL.
DECIDUOUS SHRUB, 24"-30", GROUP A				
89	FC	FORSYTHIA COURTASOL	GOLD TIDE FORSYTHIA	24"-30"
195	SB	SPIRAEA X JAPONICA 'MAGIC CARPET'	MAGIC CARPET SPIREA	24"-30"
DECIDUOUS SHRUB, NO. 2 CONT., GROUP B				
212	RA	RHUS AROMATICA 'GRO-LOW'	FRAGRANT SUMAC	NO. 2 CONT.
HERBACEOUS PERENNIAL, NO. 1 CONT., GROUP A				
86	CAK	CALAMAGROSTIS ACUTIFLORA 'KARL FOERSTER'	KARL FOERSTER FEATHER REED GRASS	NO. 1 CONT.
42	MSG	MISCANTHUS SINENSIS 'GRACILLIMUS'	MAIDEN GRASS	NO. 1 CONT.
14	MSP	MISCANTHUS SINENSIS 'PURPURESCENS'	FLAME GRASS	NO. 1 CONT.
281	RFG	RUDBECKIA FULGIDA 'GOLDSTURM'	GOLDSTURM BLACK-EYED SUSAN	NO. 1 CONT.
HERBACEOUS PERENNIAL, 4" CELL, GROUP B				
2,436	CPM	CALLIRHOE INVOLUCRATA	POPPY MALLOW	4" CELL





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STATE OF MAINE ROBERT M. SPIPLER No. 9569 REGISTERED PROFESSIONAL ENGINEER

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LANDSCAPE PLAN

DWG 12

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EROSION CONTROL MEASURES

PRE-CONSTRUCTION PHASE

PRIOR TO THE BEGINNING OF ANY CONSTRUCTION, SEDIMENT BARRIERS (SILT FENCE) WILL BE STAKED/INSTALLED ACROSS THE SLOPE(S), ON THE CONTOUR AT OR JUST BELOW THE LIMITS OF CLEARING OR GRUBBING, AND/OR JUST ABOVE ANY ADJACENT PROPERTY LINE OR WATERCOURSE TO PROTECT AGAINST CONSTRUCTION RELATED EROSION. THE PLACEMENT OF SEDIMENT BARRIERS SHALL BE COMPLETED IN ACCORDANCE WITH GUIDELINES ESTABLISHED IN BEST MANAGEMENT PRACTICES AND IN ACCORDANCE WITH THIS EROSION CONTROL PLAN AND DETAILS IN THIS PLAN SET. THIS NETWORK IS TO BE MAINTAINED BY THE CONTRACTOR UNTIL ALL EXPOSED SLOPES HAVE AT LEAST 85%-90% VIGOROUS PERENNIAL VEGETATIVE COVER TO PREVENT EROSION. TEMPORARY EROSION CONTROL MEASURES SHALL BE REMOVED WITHIN 30 DAYS AFTER PERMANENT STABILIZATION IS ATTAINED.

PRIOR TO ANY CLEARING OR GRUBBING, A CONSTRUCTION ENTRANCE/EXIT SHALL BE CONSTRUCTED AT THE INTERSECTION OF THE PROPOSED ENTRANCES AND EXISTING ROADWAY TO AVOID TRACKING OF MUD, DUST AND DEBRIS FROM THE SITE.

PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL PREPARE A DETAILED SCHEDULE AND MARKED UP PLAN INDICATING AREAS AND COMPONENTS OF THE WORK AND KEY DATES SHOWING DATE OF DISTURBANCE AND COMPLETION OF THE WORK. THE CONTRACTOR SHALL SCHEDULE A PRE-CONSTRUCTION MEETING WITH THE MUNICIPAL STAFF. THREE COPIES OF THE SCHEDULE AND MARKED UP PLAN SHALL BE PROVIDED TO THE MUNICIPALITY THREE DAYS PRIOR TO THE SCHEDULED PRE-CONSTRUCTION MEETING. SPECIAL ATTENTION SHALL BE GIVEN TO THE 14 DAY LIMIT OF DISTURBANCE IN THE SCHEDULE ADDRESSING TEMPORARY AND PERMANENT VEGETATION MEASURES.

CONSTRUCTION AND POST-CONSTRUCTION PHASE

AREAS UNDERGOING ACTUAL CONSTRUCTION SHALL ONLY EXPOSE THAT AMOUNT OF MINERAL SOIL NECESSARY FOR PROGRESSIVE AND EFFICIENT CONSTRUCTION . AN AREA CONSIDERED OPEN IS ANY AREA NOT STABILIZED WITH PAVEMENT, VEGETATION, MULCHING, EROSION CONTROL MATS, RIPRAP OR GRAVEL BASE ON A ROAD . OPEN AREAS SHALL BE ANCHORED WITH TEMPORARY EROSION CONTROL AS SHOWN ON THE DESIGN PLANS AND AS DESCRIBED WITHIN THIS EROSION CONTROL PLAN WITHIN 14-DAYS OF DISTURBANCE. AREAS LOCATED WITHIN 100' OF STREAMS SHALL BE ANCHORED WITH TEMPORARY EROSION CONTROL WITHIN SEVEN (7) DAYS. REFER TO WINTER EROSION CONTROL NOTES FOR THE TREATMENT OF OPEN AREAS AFTER OCTOBER 1ST OF THE CONSTRUCTION YEAR.

THE CONTRACTOR MUST INSTALL ANY ADDED MEASURES WHICH MAY BE NECESSARY TO CONTROL EROSION/SEDIMENTATION FROM THE SITE DEPENDENT UPON THE ACTUAL SITE AND WEATHER CONDITIONS. CONTINUATION OF EARTHWORK OPERATIONS ON ADDITIONAL AREAS SHALL NOT BEGIN UNTIL THE EXPOSED SOIL SURFACE ON THE AREA BEING WORKED HAS BEEN STABILIZED, IN ORDER TO MINIMIZE AREAS WITHOUT EROSION CONTROL PROTECTION.

EROSION CONTROL APPLICATIONS & MEASURES

THE PLACEMENT OF EROSION CONTROL MEASURES SHALL BE COMPLETED IN ACCORDANCE WITH GUIDELINES ESTABLISHED IN BEST MANAGEMENT PRACTICES AND IN ACCORDANCE WITH THE EROSION CONTROL PLAN AND DETAILS IN THE PLAN SET.

1. TEMPORARY MULCHING:

   ALL DISTURBED AREAS SHALL BE MULCHED WITH MATERIALS SPECIFIED BELOW PRIOR TO ANY STORM EVENT. ALL DISTURBED AREAS NOT FINAL GRADED WITHIN 14 DAYS SHALL BE MULCHED. ALSO, AREAS, WHICH HAVE BEEN TEMPORARILY OR PERMANENTLY SEEDED, SHALL BE MULCHED IMMEDIATELY FOLLOWING SEEDING. EROSION CONTROL BLANKETS ARE RECOMMENDED TO BE USED AT THE BASE OF GRASSED WATERWAYS AND ON SLOPES GREATER THAN 15%. MULCH ANCHORING SHOULD BE USED ON SLOPES GREATER THAN 8% AFTER SEPTEMBER 15TH OF THE CONSTRUCTION YEAR (SEE WINTER EROSION CONTROL NOTES).
   TYPES OF MULCH:
   HAY OR STRAW: SHALL BE APPLIED AT A RATE OF 75 LBS/1000 SF. (1.5 TONS PER ACRE).
   EROSION CONTROL MIX: SHALL BE PLACED EVENLY AND MUST PROVIDE 100% SOIL COVERAGE. EROSION CONTROL MIX SHALL BE APPLIED SUCH THAT THE THICKNESS ON SLOPES 3:1 OR LESS IS 2 INCHES PLUS 1/2 INCH PER 20 FEET OF SLOPE UP TO 100 FEET. THE THICKNESS ON SLOPES BETWEEN 3:1 AND 2:1 SHALL BE 4 INCHES PLUS 1/2 INCH PER 20 FEET OF SLOPE UP TO 100 FEET. THIS SHALL NOT BE USED ON SLOPES GREATER THAN 2:1.
   EROSION CONTROL BLANKET: SHALL BE INSTALLED SUCH THAT CONTINUOUS CONTACT BETWEEN THE MAT AND THE SOIL IS OBTAINED. INSTALL BLANKETS AND STAPLE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

2. SOIL STOCKPILES:

   STOCKPILES OF SOIL OR SUBSOIL SHALL BE MULCHED WITH HAY OR STRAW AT A RATE OF 75 LBS/1000 SF. (1.5 TONS PER ACRE) OR WITH A FOUR-INCH LAYER OF WOOD WASTE EROSION CONTROL MIX. THIS WILL BE DONE WITHIN 24 HOURS OF STOCKING AND RE-ESTABLISHED PRIOR TO ANY RAINFALL. ANY SOIL STOCKPILE WILL NOT BE PLACED (EVEN COVERED WITH HAY OR STRAW) WITHIN 100 FEET FROM ANY NATURAL RESOURCES.

3. NATURAL RESOURCES PROTECTION:

   ANY AREAS WITHIN 100 FEET FROM ANY NATURAL RESOURCES, IF NOT STABILIZED WITH A MINIMUM OF 75% MATURE VEGETATION CATCH, SHALL BE MULCHED USING TEMPORARY MULCHING (AS DESCRIBED IN PART 1. OF THIS SECTION) WITHIN 7 DAYS OF EXPOSURE OR PRIOR TO ANY STORM EVENT. SEDIMENT BARRIERS (AS DESCRIBED IN PART 4. OF THIS SECTION) SHALL BE PLACED BETWEEN ANY NATURAL RESOURCE AND THE DISTURBED AREA.
   PROJECTS CROSSING THE NATURAL RESOURCE SHALL BE PROTECTED A MINIMUM DISTANCE OF 100 FEET ON EITHER SIDE FROM THE RESOURCE.

4. SEDIMENT BARRIERS:

   PRIOR TO THE BEGINNING OF ANY CONSTRUCTION, SEDIMENT BARRIERS SHALL BE STAKED ACROSS THE SLOPE(S), ON THE CONTOUR AT OR JUST BELOW THE LIMITS OF CLEARING OR GRUBBING, AND/OR JUST ABOVE ANY ADJACENT PROPERTY LINE OR WATERCOURSE TO PROTECT AGAINST CONSTRUCTION RELATED EROSION. SEDIMENT BARRIERS SHALL BE MAINTAINED BY THE CONTRACTOR UNTIL ALL EXPOSED SLOPES HAVE AT LEAST 85%-90% VIGOROUS PERENNIAL VEGETATIVE COVER TO PREVENT EROSION.

   SILT FENCE: SHALL BE INSTALLED PER THE DETAIL ON THE PLANS. THE EFFECTIVE HEIGHT OF THE FENCE SHALL NOT EXCEED 36 INCHES. IT IS RECOMMENDED THAT SILT FENCE BE REMOVED BY CUTTING THE FENCE MATERIALS AT GROUND LEVEL SO AS TO AVOID ADDITIONAL SOIL DISTURBANCE.

   HAY BALES: SHALL BE INSTALLED PER THE DETAIL ON THE PLANS. BALES SHALL BE WIRE-BOUND OR STRING-TIED AND THESE BINDINGS MUST REMAIN PARALLEL WITH THE GROUND SURFACE DURING INSTALLATION TO PREVENT DETERIORATION OF THE BINDINGS. BALES SHALL BE INSTALLED WITHIN A MINIMUM 4 INCH DEEP TRENCH LINE WITH ENDS OF ADJACENT BALES TIGHTLY ABUTTING ONE ANOTHER.

   EROSION CONTROL MIX: SHALL BE INSTALLED PER THE DETAIL ON THE PLANS. THE MIX SHALL CONSIST PRIMARILY OF ORGANIC MATERIAL AND CONTAIN A WELL-GRADED MIXTURE OF PARTICLE SIZES AND MAY CONTAIN ROCKS LESS THAN 4 INCHES IN DIAMETER. THE MIX COMPOSITION SHALL MEET THE STANDARDS DESCRIBED WITHIN THE MDEP BEST MANAGEMENT PRACTICES. NO TRENCHING IS REQUIRED FOR INSTALLATION OF THIS BARRIER.

   CONTINUOUS CONTAINED BERM: SHALL BE INSTALLED PER THE DETAIL ON THE PLANS. THIS SEDIMENT BARRIER IS EROSION CONTROL MIX PLACED WITHIN A SYNTHETIC TUBULAR NETTING AND PERFORMS AS A STURDY SEDIMENT BARRIER THAT WORKS WELL ON HARD GROUND SUCH AS FROZEN CONDITIONS, TRAVELED AREAS OR PAVEMENT. NO TRENCHING IS REQUIRED FOR INSTALLATION OF THIS BARRIER.

5. TEMPORARY CHECK DAMS:

   SHALL BE INSTALLED PER THE DETAIL ON THE PLANS. CHECK DAMS ARE TO BE PLACED WITHIN DITCHES/ SWALES AS SPECIFIED ON THE DESIGN PLANS IMMEDIATELY AFTER FINAL GRADING. CHECK DAMS SHALL BE 2 FEET HIGH. TEMPORARY CHECK DAMS MAY BE REMOVED ONLY AFTER THE ROADWAYS ARE PAVED AND THE VEGETATED SWALES ARE ESTABLISHED WITH AT LEAST 85%-90% OF VIGOROUS PERENNIAL GROWTH. THE AREA BENEATH THE CHECK DAM MUST BE SEEDED AND MULCHED IMMEDIATELY AFTER REMOVAL OF THE CHECK DAM.

   STONE CHECK DAMS: SHOULD BE CONSTRUCTED OF 2 TO 3 INCH STONE AND PLACED SUCH THAT COMPLETE COVERAGE OF THE SWALE IS OBTAINED AND THAT THE CENTER OF THE DAM IS 6 INCHES LOWER THAT THE OUTER EDGES.

   HAY BALE CHECK DAMS: WE DO NOT RECOMMEND THE USE OF HAY BALES AS CHECK DAMS.

   MANUFACTURED CHECK DAMS: MANUFACTURED CHECK DAMS, AS SPECIFIED IN THE DETAIL ON THE PLANS, MAY BE USED IF AUTHORIZED BY THE PROPER LOCAL, STATE OR FEDERAL REGULATING AGENCIES. THESE UNITS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURE'S RECOMMENDATIONS.

6. STORMDRAIN INLET PROTECTION:

   INLET PROTECTION SHALL BE PLACED AROUND A STORMDRAIN DROP INLETOR CURB INLET PRIOR TO PERMANENT STABILIZATION OF THE IMMEDIATE AND UPSTREAM DISTURBED AREAS. THEY SHALL BE CONSTRUCTED IN A MANNER THAT WILL FACILITATE CLEAN-OUT AND DISPOSAL OF TRAPPED SEDIMENTS AND MINIMIZE INTERFERENCE WITH CONSTRUCTION ACTIVITIES. ANY RESULTANT PONDING OF WATER PRIOR THE PROTECTION METHOD MUST NOT CAUSE EXCESSIVE INCONVENIENCE OR DAMAGE TO ADJACENT AREAS OR STRUCTURES.

   HAY BALE DROP INLET PROTECTION: WE DO NOT RECOMMEND THE USE OF HAY BALES AS INLET PROTECTION.

   CONCRETE BLOCK AND STONE INLET SEDIMENT FILTER (DROP OR CURB INLET): SHALL BE INSTALLED PER THE DETAIL ON THE PLANS. THE HEIGHT OF THE CONCRETE BLOCK BARRIER CAN VARY BUT MUST BE BETWEEN 12 AND 24 INCHES TALL. A MINIMUM OF 1 INCH CRUSHED STONE SHALL BE USED.

   MANUFACTURED SEDIMENT BARRIERS AND FILTER (DROP OR CURB INLET): MANUFACTURED FILTERS, AS SPECIFIED IN THE DETAIL ON THE PLANS, MAY BE USED IF INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

7. STABILIZED CONSTRUCTION ENTRANCE/EXIT:

   PRIOR TO CLEARING AND/OR GRUBBING THE SITE A STABILIZED CONSTRUCTION ENTRANCE/EXIT SHALL BE CONSTRUCTED WHEREVER TRAFFIC WILL EXIT THE CONSTRUCTION SITE ONTO A PAVED ROADWAY IN ORDER TO MINIMIZE THE TRACKING OF SEDIMENT AND DEBRIS FROM THE CONSTRUCTION SITE ONTO PUBLIC ROADWAYS. THE ENTRANCES AND ADJACENT ROADWAY AREAS SHALL BE PERIODICALLY SWEPT OR WASHED TO FURTHER MINIMIZE THE TRACKING OF MUD, DUST OR DEBRIS FROM THE CONSTRUCTION AREA. STABILIZED CONSTRUCTION EXITS SHALL BE CONSTRUCTED IN AREAS SPECIFIED ON THE PLANS AND AS DETAILED ON THE PLANS.

8. DUST CONTROL:

   DUST CONTROL DURING CONSTRUCTION SHALL BE ACHIEVED BY THE USE OF A WATERING TRUCK TO PERIODICALLY SPRINKLE THE EXPOSED ROADWAY AREAS AS NECESSARY TO REDUCE DUST DURING THE DRY MONTHS. APPLYING OTHER DUST CONTROL PRODUCTS SUCH AS CALCIUM CHLORIDE OR OTHER MANUFACTURED PRODUCTS ARE ALLOWED IF AUTHORIZED BY THE PROPER LOCAL, STATE AND/OR FEDERAL REGULATING AGENCIES. HOWEVER, IT IS THE CONTRACTOR'S ULTIMATE RESPONSIBILITY TO MITIGATE DUST AND SOIL LOSS FROM THE SITE.

9. TEMPORARY VEGETATION:

   TEMPORARY VEGETATION SHALL BE APPLIED TO DISTURBED AREAS THAT WILL NOT RECEIVE FINAL GRADING FOR PERIODS UP TO 12 MONTHS. THIS PROCEDURE SHOULD BE USED EXTENSIVELY IN AREAS ADJACENT TO NATURAL RESOURCES. SEEDBED PREPARATION AND APPLICATION OF SEED SHALL BE CONDUCTED AS INDICATED IN THE PERMANENT VEGETATION SECTION OF THIS NARRATIVE. SPECIFIC SEEDS (FAST GROWING AND SHORT LIVING) SHALL BE SELECTED FROM THE MAINE EROSION AND SEDIMENT CONTROL BMP MANUAL DATED 3/2003 OR LATER. ALTERNATIVE EROSION CONTROL MEASURES SHOULD BE USED IF SEEDING CAN NOT BE DONE BEFORE SEPTEMBER 15TH OF THE CONSTRUCTION YEAR.

10. PERMANENT VEGETATION:

    REVEGETATION MEASURES SHALL COMMENCE IMMEDIATELY UPON COMPLETION OF FINAL GRADING OF AREAS TO BE LOAMED AND SEEDED. THE APPLICATION OF SEED SHALL BE CONDUCTED BETWEEN APRIL 1ST AND OCTOBER 1ST OF THE CONSTRUCTION YEAR. PLEASE REFER TO THE WINTER EROSION CONTROL NOTES FOR MORE DETAIL. REVEGETATION MEASURES SHALL CONSIST OF THE FOLLOWING:

    SEEDBED PREPARATION:

    A. FOUR (4) INCHES OF LOAM SHALL BE SPREAD OVER DISTURBED AREAS AND SMOOTHED TO A UNIFORM SURFACE. LOAM SHALL BE FREE OF SUBSOIL, CLAY LUMPS, STONES AND OTHER OBJECTS OVER 2 INCHES OR LARGER IN ANY DIMENSION, AND WITHOUT WEEDS, ROOTS OR OTHER OBJECTIONABLE MATERIAL.

    B. SOILS TESTS SHALL BE TAKEN AT THE TIME OF SOIL STRIPPING TO DETERMINE FERTILIZATION REQUIREMENTS. SOILS TESTS SHALL BE TAKEN PROMPTLY AS TO NOT INTERFERE WITH THE 14-DAY LIMIT ON SOIL EXPOSURE. BASED UPON TEST RESULTS, SOIL AMENDMENTS SHALL BE INCORPORATED INTO THE SOIL PRIOR TO FINAL SEEDING. IN LIEU OF SOIL TESTS, SOIL AMENDMENTS MAY BE APPLIED AS FOLLOWS:

ITEM	APPLICATION RATE
10-20-20 FERTILIZER (N-P2O5-K2O OR EQUAL)	18.4 LBS/1000 SF.
GROUND LIMESTONE (50% CALCIUM & MAGNESIUM OXIDE)	138 LBS/1000 SF.

    C. WORK LIME AND FERTILIZER INTO THE SOIL AS NEARLY AS PRACTICAL TO A DEPTH OF 4 INCHES WITH PROPER EQUIPMENT. ROLL THE AREA TO FIRM THE SEEDBED EXCEPT ON CLAY OR SILTY SOILS OR COARSE SAND.

    APPLICATION OF SEED:

    A. SEEDING: SHALL BE CONDUCTED BETWEEN APRIL 1ST AND OCTOBER 1ST OF THE CONSTRUCTION YEAR. GENERALLY A SEED MIXTURE MAY BE APPLIED AS FOLLOWS: (MDEP SEED MIX 2 IS DISPLAYED)

SEED TYPE	APPLICATION RATE
CREEPING RED FESCUE	0.46 LBS/1000 SF. (20 LBS/ACRE)
PERENNIAL RYE	0.05 LBS/1000 SF. (2 LBS/ACRE)
TALL FESCUE	0.46 LBS/1000 SF. (20 LBS/ACRE)
TOTAL:	0.97 LBS/1000 SF. (42 LBS/ACRE)

    NOTE: A SPECIFIC SEED MIXTURE SHOULD BE CHOSEN TO MATCH THE SOILS CONDITION OF THE SITE. VARIOUS AGENCIES CAN RECOMMEND SEED MIXTURES. MDEP RECOMMENDED SEED MIXTURES ARE IN THE EROSION AND SEDIMENT CONTROL BMP MANUAL DATED 3/2003 OR LATER.

    B. HYDROSEEDING: SHALL BE CONDUCTED ON PREPARED AREAS WITH SLOPES LESS THAN 2:1. LIME AND FERTILIZER MAY BE APPLIED SIMULTANEOUSLY WITH THE SEED. RECOMMENDED SEEDING RATES MUST BE INCREASED BY 10% WHEN HYDROSEEDING.

    C. MULCHING: SHALL COMMENCE IMMEDIATELY AFTER SEED IS APPLIED. REFER TO THE TEMPORARY MULCHING SECTION OF THIS NARRATIVE FOR DETAILS.

    SODDING:

    FOLLOWING SEEDBED PREPARATION, SOD CAN BE APPLIED IN LIEU OF SEEDING IN AREAS WHERE IMMEDIATE VEGETATION IS MOST BENEFICIAL SUCH AS DITCHES, AROUND STORMWATER DROP INLETS AND AREAS OF AESTHETIC VALUE. SOD SHOULD BE LAID AT RIGHT ANGLES TO THE DIRECTION OF FLOW, STARTING AT THE LOWEST ELEVATION. SOD SHOULD BE ROLLED OR TAMPED DOWN TO EVEN OUT THE JOINTS ONCE LAID DOWN. WHERE FLOW IS PREVALENT THE SOD MUST BE PROPERLY ANCHORED DOWN. IRRIGATE THE SOD IMMEDIATELY AFTER INSTALLATION. IN MOST CASES, SOD CAN BE ESTABLISHED BETWEEN APRIL 1ST AND NOVEMBER 15TH OF THE CONSTRUCTION YEAR, HOWEVER, REFER TO THE WINTER EROSION CONTROL NOTES FOR ANY ACTIVITIES AFTER OCTOBER 1ST.

    TRENCH DEWATERING AND TEMPORARY STREAM DIVERSION:

    WATER FROM CONSTRUCTION TRENCH DEWATERING OR TEMPORARY STREAM DIVERSION WILL PASS FIRST THROUGH A FILTER BAG OR SECONDARY CONTAINMENT STRUCTURE (E.G. HAY BALE LINED POOL) PRIOR TO DISCHARGE. THE DISCHARGE SITE SHALL BE SELECTED TO AVOID FLOODING AND SEDIMENT DISCHARGES TO A PROTECTED RESOURCE. IN NO CASE SHALL THE FILTER BAG OR CONTAINMENT STRUCTURE BE LOCATED WITHIN 100 FEET OF A PROTECTED NATURAL RESOURCE.

    STANDARDS FOR TIMELY STABILIZATION:

    STANDARD FOR THE TIMELY STABILIZATION OF DISTURBED SLOPES -- THE CONTRACTOR WILL CONSTRUCT AND STABILIZE STONE-COVERED SLOPES BY NOVEMBER 15. THE CONTRACTOR WILL SEED AND MULCH ALL SLOPES TO BE VEGETATED BY SEPTEMBER 15. THE MDEP WILL CONSIDER ANY AREA HAVING A GRADE GREATER THAN 15% (6.67H:1V) TO BE A SLOPE. IF THE CONTRACTOR FAILS TO STABILIZE ANY SLOPE TO BE VEGETATED BY SEPTEMBER 15, THEN THE CONTRACTOR WILL TAKE ONE OF THE FOLLOWING ACTIONS TO STABILIZE THE SLOPE FOR LATE FALL AND WINTER.

    A. STABILIZE THE SOIL WITH TEMPORARY VEGETATION AND EROSION CONTROL MATS -- BY OCTOBER 1 THE CONTRACTOR WILL SEED THE DISTURBED SLOPE WITH WINTER RYE AT A SEEDING RATE OF 3 POUNDS PER 1,000 SQUARE FEET AND APPLY EROSION CONTROL MATS OVER THE MULCHED SLOPE. THE CONTRACTOR WILL MONITOR GROUTH OF THE RYE OVER THE NEXT 30 DAYS. IF THE RYE FAILS TO GROW AT LEAST THREE INCHES OR COVER AT LEAST 75% OF THE DISTURBED SLOPE BY NOVEMBER 1, THEN THE APPLICANT WILL COVER THE SLOPE WITH A LAYER OF WOOD WASTE COMPOST AS DESCRIBED IN ITEM 2(C.) OF THIS STANDARD OR WITH STONE RIPRAP AS DESCRIBED IN ITEM 2(D.) OF THIS STANDARD.
    B. STABILIZE THE SLOPE WITH SOD -- THE CONTRACTOR WILL STABILIZE THE DISTURBED SLOPE WITH PROPERLY INSTALLED SOD BY NOVEMBER 15. PROPER INSTALLATION INCLUDES THE APPLICANT PINNING THE SOD ONTO THE SLOPE WITH WIRE PINS, ROLLING THE SOD TO GUARANTEE CONTACT BETWEEN THE SOD AND UNDERLYING SOIL, AND WATERING THE SOD TO PROMOTE ROOT GROUTH INTO THE DISTURBED SOIL. THE APPLICANT WILL NOT USE LATE-SEASON SOD INSTALLATION TO STABILIZE SLOPES HAVING A GRADE GREATER THAN 3:1 (33%) (3H:1V).
    C. STABILIZE THE SLOPE WITH WOOD WASTE COMPOST -- THE CONTRACTOR WILL PLACE A SIX-INCH LAYER OF WOOD WASTE COMPOST ON THE SLOPE BY NOVEMBER 15. PRIOR TO PLACING THE WOOD WASTE COMPOST, THE APPLICANT WILL REMOVE ANY SNOW ACCUMULATION ON THE DISTURBED SLOPE. THE APPLICANT WILL NOT USE WOOD WASTE COMPOST TO STABILIZE SLOPES HAVING GRADES GREATER THAN 50% (2H:1V) OR HAVING GROUNDWATER SEEPS ON THE SLOPE FACE.
    D. STABILIZE THE SLOPE WITH STONE RIPRAP -- THE CONTRACTOR WILL PLACE A LAYER OF STONE RIPRAP ON THE SLOPE BY NOVEMBER 15. THE APPLICANT WILL HIRE A REGISTERED PROFESSIONAL ENGINEER TO DETERMINE THE STONE SIZE NEEDED FOR STABILITY AND TO DESIGN A FILTER LAYER FOR UNDERNEATH THE RIPRAP.

    STANDARD FOR THE TIMELY STABILIZATION OF DISTURBED SOILS -- BY SEPTEMBER 15 THE CONTRACTOR WILL SEED AND MULCH ALL DISTURBED SOILS ON AREAS HAVING A SLOPE LESS THAN 15%. IF THE CONTRACTOR FAILS TO STABILIZE THESE SOILS BY THIS DATE, THEN THE CONTRACTOR WILL TAKE ONE OF THE FOLLOWING ACTIONS TO STABILIZE THE SOIL FOR LATE FALL AND WINTER.

    A. STABILIZE THE SOIL WITH TEMPORARY VEGETATION -- BY OCTOBER 1 THE CONTRACTOR WILL SEED THE DISTURBED SOIL WITH WINTER RYE AT A SEEDING RATE OF 3 POUNDS PER 1000 SQUARE FEET, LIGHTLY MULCH THE SEEDED SOIL WITH HAY OR STRAW AT 75 POUNDS PER 1000 SQUARE FEET, AND ANCHOR THE MULCH WITH PLASTIC NETTING. THE APPLICANT WILL MONITOR GROUTH OF THE RYE OVER THE NEXT 30 DAYS. IF THE RYE FAILS TO GROW AT LEAST THREE INCHES OR COVER AT LEAST 75% OF THE DISTURBED SOIL BEFORE NOVEMBER 15, THEN THE APPLICANT WILL MULCH THE AREA FOR OVER-WINTER PROTECTION AS DESCRIBED IN ITEM 3(C.) OF THIS STANDARD.
    B. STABILIZE THE SOIL WITH SOD -- THE APPLICANT WILL STABILIZE THE DISTURBED SOIL WITH PROPERLY INSTALLED SOD BY OCTOBER 1. PROPER INSTALLATION INCLUDES THE APPLICANT PINNING THE SOD ONTO THE SOIL WITH WIRE PINS, ROLLING THE SOD TO GUARANTEE CONTACT BETWEEN THE SOD AND UNDERLYING SOIL, AND WATERING THE SOD TO PROMOTE ROOT GROUTH INTO THE DISTURBED SOIL.
    C. STABILIZE THE SOIL WITH MULCH -- BY NOVEMBER 15 THE APPLICANT WILL MULCH THE DISTURBED SOIL BY SPREADING HAY OR STRAW AT A RATE OF AT LEAST 150 POUNDS PER 1000 SQUARE FEET ON THE AREA SO THAT NO SOIL IS VISIBLE THROUGH THE MULCH. PRIOR TO APPLYING THE MULCH, THE APPLICANT WILL REMOVE ANY SNOW ACCUMULATION ON THE DISTURBED AREA. IMMEDIATELY AFTER APPLYING THE MULCH, THE APPLICANT WILL ANCHOR THE MULCH WITH PLASTIC NETTING TO PREVENT WIND FROM MOVING THE MULCH OFF THE DISTURBED SOIL.

CONSTRUCTION SCHEDULE

SITE IMPROVEMENTS WILL BEGIN IN SPRING OF 2014. THE FOLLOWING SCHEDULE IS ANTICIPATED FOR THE CONSTRUCTION OF THE ROADWAY IMPROVEMENTS.

SCHEDULE

1.	ESTIMATED CONSTRUCTION TIME:	6-9 WEEKS
*2.	EROSION CONTROL MEASURES PLACED.	WEEK 1
3.	REMOVAL OF ASPHALT MEDIANS / ROADWAY ASPHALT.	WEEK 1 - WEEK 2
4.	EARTH WORK OPERATIONS / CONSTRUCTION OF CURBING.	WEEK 2 - WEEK 3
5.	CONSTRUCTION OF STORMWATER TREATMENT AREAS.	WEEK 3 - WEEK 4
6.	CONSTRUCTION OF STAMPED CONCRETE MEDIANS.	WEEK 4 - WEEK 5
7.	INSTALL MEDIAN LOAM, INSTALL WINTER EROSION CONTROL.	WEEK 5 - WEEK 6
8.	INSTALL MEDIAN LANDSCAPING, SEED AND MULCH (SPRING 2014). GROWING SEASON)	WEEK 7 - WEEK 9
9.	MULCH SPREAD FOR WINTER EROSION CONTROL.	OCTOBER OF CONSTRUCTION YEAR
10.	START FINAL SEEDING ON PREPARED AREAS (DURING GROWING SEASON).	WEEK 9
*11.	BIWEEKLY MONITORING OF VEGETATIVE GROUTH.	WEEK 10
**12.	RE-SEEDING OF AREAS, IF NEEDED.	WEEK 10
**13.	REMOVAL OF EROSION CONTROL DEVICES.	UPON FINAL PROJECT COMPLETION

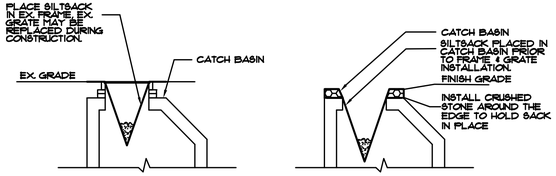
* INSTALLATION OF CATCH BASIN PROTECTIONS OF ANY CATCH BASIN WITH RIGHT-OF-WAY OF PROJECTS LIMITS.

** DATES ARE SUBJECT TO CHANGE AT THE DISCRETION OF THE ENGINEER, DEPENDING ON CONSTRUCTION PROGRESS.

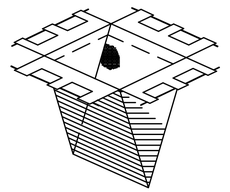
INSPECTIONS/MONITORING:

1. MAINTENANCE MEASURES SHALL BE APPLIED AS NEEDED DURING THE ENTIRE CONSTRUCTION CYCLE. AFTER EACH RAINFALL, SNOW STORM OR PERIOD OF THAWING AND RUNOFF, OR AT LEAST EVERY SEVEN (7) DAYS, THE CONTRACTOR SHALL PERFORM A VISUAL INSPECTION OF ALL INSTALLED EROSION CONTROL MEASURES. THE CONTRACTOR SHALL PERFORM REPAIRS AS NEEDED TO ALLOW CONTINUED PROPER FUNCTIONING OF THE EROSION CONTROL MEASURE. THE CONTRACTOR SHALL PROVIDE THE NECESSARY REGULATING AGENCIES WITH WRITTEN DOCUMENTATION DESCRIBING DATES OF INSPECTIONS AND NECESSARY FOLLOW-UP WORK TO MAINTAIN EROSION CONTROL MEASURES MEETING THE REQUIREMENTS OF THIS PLAN.

2. FOLLOWING THE TEMPORARY AND/OR FINAL SEEDINGS, THE CONTRACTOR SHALL INSPECT THE WORK AREA SEMIMONTHLY UNTIL THE SEEDINGS HAVE BEEN ESTABLISHED. ESTABLISHED MEANS A MINIMUM OF 85%-90% OF AREAS VEGETATED WITH VIGOROUS GROWTH. RESEEDING SHALL BE CARRIED OUT BY THE CONTRACTOR WITH FOLLOW-UP INSPECTIONS IN THE EVENT OF ANY FAILURES UNTIL VEGETATION IS ADEQUATELY ESTABLISHED.



EXISTING BASIN — NEW INSTALLATION



SILT SACK PROTECTION

NOTES:
PRIOR TO FINAL GRADING AND PAVING OPERATIONS BEGIN A CATCH BASIN INSERT (SUCH AS A SILT SACK® OR A DANDY BAG® II) MUST BE INSTALLED IN EACH BASIN PER MANUFACTURES INSTRUCTIONS. HAY BALES SHOULD BE REMOVED ONCE INSERTS ARE INSTALLED.

CATCH BASIN PROTECTION DETAIL (FOR PAVED AREAS)

NOT TO SCALE

DATE	APP'D	REVISIONS
28-30-13	RAM	95% PLANS SUBMISSION
29-30-13	RAM	95% COMMENTS
03-18-14	RAM	BID SET

DRAWN BY: BRF/JRH
APPROVED BY: —
DATE: —
CHECKED BY: RAM
DATE: —
PROJECT NO. 13125
SCALE: AS NOTED
03-18-14

STATE OF MAINE — ROBERT F. MASPOLI — 10456 — REGISTERED PROFESSIONAL ENGINEER

LONG CREEK WATERSHED MANAGEMENT DISTRICT
35 MAIN STREET
SUITE 3
WINDHAM, MAINE 04062
207-892-4700

LONG CREEK Watershed Management District

CITY OF SOUTH PORTLAND
GORHAM ROAD DRAINAGE IMPROVEMENTS
MEDIAN ALTERATIONS

DETAILS

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WINTER EROSION CONTROL MEASURES

THE WINTER CONSTRUCTION PERIOD IS FROM OCTOBER 1 THROUGH APRIL 15. IF THE CONSTRUCTION SITE IS NOT STABILIZED WITH PAVEMENT, A ROAD GRAVEL BASE, 75% MATURE VEGETATION COVER OR RIPRAP BY NOVEMBER 15 THEN THE SITE NEEDS TO BE PROTECTED WITH OVER-WINTER STABILIZATION. AN AREA CONSIDERED OPEN IS ANY AREA NOT STABILIZED WITH PAVEMENT, VEGETATION, MULCHING, EROSION CONTROL MATS, RIPRAP OR GRAVEL BASE ON A ROAD.
WINTER EXCAVATION AND EARTHWORK SHALL BE COMPLETED SUCH THAT NO MORE THAN 1 ACRE OF THE SITE IS WITHOUT STABILIZATION AT ANY ONE TIME. LIMIT THE EXPOSED AREA TO THOSE AREAS IN WHICH WORK IS EXPECTED TO BE UNDERTAKEN DURING THE PROCEEDING 15 DAYS AND THAT CAN BE MULCHED IN ONE DAY PRIOR TO ANY SNOW EVENT.
ALL AREAS SHALL BE CONSIDERED TO BE DENUDED UNTIL THE SUBBASE GRAVEL IS INSTALLED IN ROADWAY AREAS OR THE AREAS OF FUTURE LOAM AND SEED HAVE BEEN LOAMED, SEEDED AND MULCHED. HAY AND STRAW MULCH RATE SHALL BE A MINIMUM OF 150 LBS/1,000 SF. (3 TONS/ACRE) AND SHALL BE PROPERLY ANCHORED.
THE CONTRACTOR MUST INSTALL ANY ADDED MEASURES WHICH MAY BE NECESSARY TO CONTROL EROSION/SEDIMENTATION FROM THE SITE DEPENDENT UPON THE ACTUAL SITE AND WEATHER CONDITIONS.
CONTINUATION OF EARTHWORK OPERATIONS ON ADDITIONAL AREAS SHALL NOT BEGIN UNTIL THE EXPOSED SOIL SURFACE ON THE AREA BEING WORKED HAS BEEN STABILIZED, IN ORDER TO MINIMIZE AREAS WITHOUT EROSION CONTROL PROTECTION.

1. SOIL STOCKPILES

STOCKPILES OF SOIL OR SUBSOIL WILL BE MULCHED FOR OVER WINTER PROTECTION WITH HAY OR STRAW AT TWICE THE NORMAL RATE OR AT 150 LBS/1000 SF. (3 TONS PER ACRE) OR WITH A FOUR-INCH LAYER OF WOOD WASTE EROSION CONTROL MIX. THIS WILL BE DONE WITHIN 24 HOURS OF STOCKING AND RE-ESTABLISHED PRIOR TO ANY RAINFALL OR SNOWFALL.
ANY SOIL STOCKPILE WILL NOT BE PLACED (EVEN COVERED WITH HAY OR STRAW) WITHIN 100 FEET FROM ANY NATURAL RESOURCES.

2. NATURAL RESOURCES PROTECTION

ANY AREAS WITHIN 100 FEET FROM ANY NATURAL RESOURCES, IF NOT STABILIZED WITH A MINIMUM OF 75% MATURE VEGETATION CATCH, SHALL BE MULCHED BY DECEMBER 1 AND ANCHORED WITH PLASTIC NETTING OR PROTECTED WITH EROSION CONTROL MATS.
DURING WINTER CONSTRUCTION, A DOUBLE LINE OF SEDIMENT BARRIERS (I.E. SILT FENCE BACKED WITH HAY BALES OR EROSION CONTROL MIX) WILL BE PLACED BETWEEN ANY NATURAL RESOURCE AND THE DISTURBED AREA.
PROJECTS CROSSING THE NATURAL RESOURCE SHALL BE PROTECTED A MINIMUM DISTANCE OF 100 FEET ON EITHER SIDE FROM THE RESOURCE. EXISTING PROJECTS NOT STABILIZED BY DECEMBER 1 SHALL BE PROTECTED WITH THE SECOND LINE OF SEDIMENT BARRIER TO ENSURE FUNCTIONALITY DURING THE SPRING THAW AND RAINS.

3. SEDIMENT BARRIERS

DURING FROZEN CONDITIONS, SEDIMENT BARRIERS SHALL CONSIST OF WOOD WASTE FILTER BERMS AS FROZEN SOIL PREVENTS THE PROPER INSTALLATION OF HAY BALES AND SEDIMENT SILT FENCES.

4. MULCHING

ALL AREA SHALL BE CONSIDERED TO BE DENUDED UNTIL AREAS OF FUTURE LOAM AND SEED HAVE BEEN LOAMED, SEEDED AND MULCHED. HAY AND STRAW MULCH SHALL BE APPLIED AT A RATE OF 150 LB. PER 1000 SQUARE FEET OR 3 TONS/ACRE (TWICE THE NORMAL ACCEPTED RATE OF 75-LBS/1000 SF. OR 1.5 TONS/ACRE) AND SHALL BE PROPERLY ANCHORED.
MULCH SHALL NOT BE SPREAD ON TOP OF SNOW. THE SNOW WILL BE REMOVED DOWN TO A ONE-INCH DEPTH OR LESS PRIOR TO APPLICATION.
AFTER EACH DAY OF FINAL GRADING, THE AREA WILL BE PROPERLY STABILIZED WITH ANCHORED HAY OR STRAW OR EROSION CONTROL MATTING.
AN AREA SHALL BE CONSIDERED TO HAVE BEEN STABILIZED WHEN EXPOSED SURFACES HAVE BEEN EITHER MULCHED WITH STRAW OR HAY AT A RATE OF 150 LB. PER 1,000 SQUARE FEET (3TONS/ACRE) AND ADEQUATELY ANCHORED THAT GROUND SURFACE IS NOT VISIBLE THOUGH THE MULCH.

BETWEEN THE DATES OF SEPTEMBER 1 AND APRIL 15, ALL MULCH SHALL BE ANCHORED BY EITHER PEG LINE, MULCH NETTING, ASPHALT EMULSION CHEMICAL, TRACK OR WOOD CELLULOSE FIBER. WHEN GROUND SURFACE IS NOT VISIBLE THOUGH THE MULCH THEN COVER IS SUFFICIENT.
AFTER NOVEMBER 1ST, MULCH AND ANCHORING OF ALL BARE SOIL SHALL OCCUR AT THE END OF EACH FINAL GRADING WORK DAY.

5. MULCHING ON SLOPES AND DITCHES

SLOPES SHALL NOT BE LEFT EXPOSED FOR ANY EXTENDED TIME OF WORK SUSPENSION UNLESS FULLY MULCHED AND ANCHORED WITH PEG AND NETTING OR WITH EROSION CONTROL BLANKETS.
MULCHING SHALL BE APPLIED AT A RATE OF 230 LBS/1000 SF. ON ALL SLOPES GREATER THAN 8%.
MULCH NETTING SHALL BE USED TO ANCHOR MULCH IN ALL DRAINAGE WAYS WITH A SLOPE GREATER THAN 3% FOR SLOPES EXPOSED TO DIRECT WINDS AND FOR ALL OTHER SLOPES GREATER THAN 8%.
EROSION CONTROL BLANKETS SHALL BE USED IN LIEU OF MULCH IN ALL DRAINAGE WAYS WITH SLOPES 8%.
EROSION CONTROL MIX CAN BE USED TO SUBSTITUTE EROSION CONTROL BLANKETS ON ALL SLOPES EXCEPT DITCHES.

6. SEEDING

BETWEEN THE DATES OF OCTOBER 15 AND APRIL 1ST, LOAM OR SEED WILL NOT BE REQUIRED. DURING PERIODS OF ABOVE FREEZING TEMPERATURES FINISHED AREAS SHALL BE FINE GRADED AND EITHER PROTECTED WITH MULCH OR TEMPORARILY SEEDED AND MULCHED UNTIL SUCH TIME AS THE FINAL TREATMENT CAN BE APPLIED. IF THE DATE IS AFTER NOVEMBER 1ST AND IF THE EXPOSED AREA HAS BEEN LOOMED, FINAL GRADED WITH A UNIFORM SURFACE, THEN THE AREA MAY BE DORMANT SEEDED AT A RATE OF 3 TIMES HIGHER THAN SPECIFIED FOR PERMANENT SEED AND THEN MULCHED.
DORMANT SEEDING MAY BE SELECTED TO BE PLACED PRIOR TO THE PLACEMENT OF MULCH AND FABRIC NETTING ANCHORED WITH STAPLES.
IF DORMANT SEEDING IS USED FOR THE SITE, ALL DISTURBED AREAS SHALL RECEIVE 4' OF LOAM AND SEED AT AN APPLICATION RATE OF 5LBS/1000 SF. ALL AREAS SEEDED DURING THE WINTER WILL BE INSPECTED IN THE SPRING FOR ADEQUATE CATCH. ALL AREAS SUFFICIENTLY VEGETATED (LESS THAN 75% CATCH) SHALL BE REVEGETATED BY REPLACING LOAM, SEED AND MULCH. IF DORMANT SEEDING IS NOT USED FOR THE SITE, ALL DISTURBED AREAS SHALL BE REVEGETATED IN THE SPRING.

7. TRENCH DEWATERING AND TEMPORARY STREAM DIVERSION

WATER FROM CONSTRUCTION TRENCH DEWATERING OR TEMPORARY STREAM DIVERSION WILL PASS FIRST THROUGH A FILTER BAG OR SECONDARY CONTAINMENT STRUCTURE (E.G. HAY BALE LINED POOL,) PRIOR TO DISCHARGE. THE DISCHARGE SITE SHALL BE SELECTED TO AVOID FLOODING, ICING, AND SEDIMENT DISCHARGES TO A PROTECTED RESOURCE. IN NO CASE SHALL THE FILTER BAG OR CONTAINMENT STRUCTURE BE LOCATED WITHIN 100 FEET OF A PROTECTED NATURAL RESOURCE.

8. INSPECTION AND MONITORING

MAINTENANCE MEASURES SHALL BE APPLIED AS NEEDED DURING THE ENTIRE CONSTRUCTION SEASON, AFTER EACH RAINFALL, SNOW STORM OR PERIOD OF THAWING AND RUNOFF, THE SITE CONTRACTOR SHALL PERFORM A VISUAL INSPECTION OF ALL INSTALLED EROSION CONTROL MEASURES AND PERFORM REPAIRS AS NEEDED TO INSURE THEIR CONTINUOUS FUNCTION. FOLLOWING THE TEMPORARY AND OR FINAL SEEDING AND MULCHING, THE CONTRACTOR SHALL IN THE SPRING INSPECT AND REPAIR ANY DAMAGES AND/ OR UNESTABLISHED SPOTS. ESTABLISHED VEGETATIVE COVER MEANS A MINIMUM OF 85 TO 90% OF AREAS VEGETATED WITH VIGOROUS GROWTH.

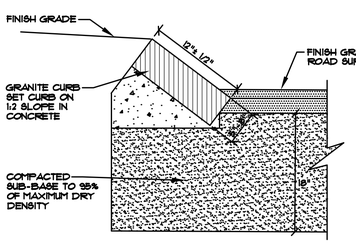
STANDARDS FOR TIMELY STABILIZATION OF CONSTRUCTION SITES DURING WINTER

1. STANDARD FOR THE TIMELY STABILIZATION OF DITCHES AND CHANNELS -- THE APPLICANT WILL CONSTRUCT AND STABILIZE ALL STONE-LINED DITCHES AND CHANNELS ON THE SITE BY NOVEMBER 15. THE APPLICANT WILL CONSTRUCT AND STABILIZE ALL GRASS-LINED DITCHES AND CHANNELS ON THE SITE BY SEPTEMBER 15. IF THE APPLICANT FAILS TO STABILIZE A DITCH OR CHANNEL TO BE GRASS-LINED BY SEPTEMBER 15, THEN THE APPLICANT WILL TAKE ONE OF THE FOLLOWING ACTIONS TO STABILIZE THE DITCH FOR LATE FALL AND WINTER.

INSTALL A SOD LINING IN THE DITCH -- THE APPLICANT WILL LINE THE DITCH WITH PROPERLY INSTALLED SOD BY OCTOBER 1. PROPER INSTALLATION INCLUDES THE APPLICANT PINNING THE SOD ONTO THE SOIL WITH WIRE PINS, ROLLING THE SOD TO GUARANTEE CONTACT BETWEEN THE SOD AND UNDERLYING SOIL, WATERING THE SOD TO PROMOTE ROOT GROWTH INTO THE DISTURBED SOIL, AND ANCHORING THE SOD WITH JUTE OR PLASTIC MESH TO PREVENT THE SOD STRIPS FROM SLOUGHING DURING FLOW CONDITIONS.
INSTALL A STONE LINING IN THE DITCH --THE APPLICANT WILL LINE THE DITCH WITH STONE RIPRAP BY NOVEMBER 15. THE APPLICANT WILL HIRE A REGISTERED PROFESSIONAL ENGINEER TO DETERMINE THE STONE SIZE AND LINING THICKNESS NEEDED TO WITHSTAND THE ANTICIPATED FLOW VELOCITIES AND FLOW DEPTHS WITHIN THE DITCH. IF NECESSARY, THE APPLICANT WILL REGRADE THE DITCH PRIOR TO PLACING THE STONE LINING SO TO PREVENT THE STONE LINING FROM REDUCING THE DITCH'S CROSS-SECTIONAL AREA.

2. STANDARD FOR THE TIMELY STABILIZATION OF DISTURBED SLOPES -- THE APPLICANT WILL CONSTRUCT AND STABILIZE STONE-COVERED SLOPES BY NOVEMBER 15. THE APPLICANT WILL SEED AND MULCH ALL SLOPES TO BE VEGETATED BY SEPTEMBER 15. THE DEPARTMENT WILL CONSIDER ANY AREA HAVING A GRADE GREATER THAN 15% (10H:1V) TO BE A SLOPE. IF THE APPLICANT FAILS TO STABILIZE ANY SLOPE TO BE VEGETATED BY SEPTEMBER 15, THEN THE APPLICANT WILL TAKE ONE OF THE FOLLOWING ACTIONS TO STABILIZE THE SLOPE FOR LATE FALL AND WINTER.
STABILIZE THE SOIL WITH TEMPORARY VEGETATION AND EROSION CONTROL MATS -- BY OCTOBER 1 THE APPLICANT WILL SEED THE DISTURBED SLOPE WITH WINTER RYE AT A SEEDING RATE OF 3 POUNDS PER 1000 SQUARE FEET AND APPLY EROSION CONTROL MATS OVER THE MULCHED SLOPE. THE APPLICANT WILL MONITOR GROWTH OF THE RYE OVER THE NEXT 30 DAYS. IF THE RYE FAILS TO GROW AT LEAST THREE INCHES OR COVER AT LEAST 75% OF THE DISTURBED SLOPE BY NOVEMBER 1, THEN THE APPLICANT WILL COVER THE SLOPE WITH A LAYER OF WOOD WASTE COMPOST AS DESCRIBED IN ITEM III OF THIS CONDITION OR WITH STONE RIPRAP AS DESCRIBED IN ITEM IV OF THIS CONDITION.
STABILIZE THE SLOPE WITH SOD -- THE APPLICANT WILL STABILIZE THE DISTURBED SLOPE WITH PROPERLY INSTALLED SOD BY OCTOBER 1. PROPER INSTALLATION INCLUDES THE APPLICANT PINNING THE SOD ONTO THE SLOPE WITH WIRE PINS, ROLLING THE SOD TO GUARANTEE CONTACT BETWEEN THE SOD AND UNDERLYING SOIL, AND WATERING THE SOD TO PROMOTE ROOT GROWTH INTO THE DISTURBED SOIL. THE APPLICANT WILL NOT USE LATE-SEASON SOD INSTALLATION TO STABILIZE SLOPES HAVING A GRADE GREATER THAN 33% (3H:1V).
STABILIZE THE SLOPE WITH WOOD WASTE COMPOST -- THE APPLICANT WILL PLACE A SIX-INCH LAYER OF WOOD WASTE COMPOST ON THE SLOPE BY NOVEMBER 15. PRIOR TO PLACING THE WOOD WASTE COMPOST, THE APPLICANT WILL REMOVE ANY SNOW ACCUMULATION ON THE DISTURBED SLOPE. THE APPLICANT WILL NOT USE WOOD WASTE COMPOST TO STABILIZE SLOPES HAVING GRADES GREATER THAN 50% (2H:1V) OR HAVING GROUNDWATER SEEPS ON THE SLOPE FACE.
STABILIZE THE SLOPE WITH STONE RIPRAP -- THE APPLICANT WILL PLACE A LAYER OF STONE RIPRAP ON THE SLOPE BY NOVEMBER 15. THE APPLICANT WILL HIRE A REGISTERED PROFESSIONAL ENGINEER TO DETERMINE THE STONE SIZE NEEDED FOR STABILITY AND TO DESIGN A FILTER LAYER FOR UNDERNEATH THE RIPRAP.

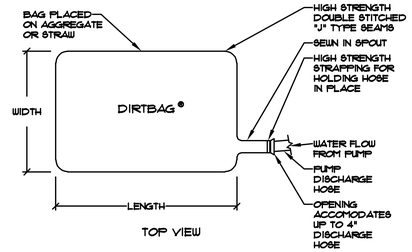
3. STANDARD FOR THE TIMELY STABILIZATION OF DISTURBED SOILS -- BY SEPTEMBER 15 THE APPLICANT WILL SEED AND MULCH ALL DISTURBED SOILS ON AREAS HAVING A SLOPE LESS THAN 15%. IF THE APPLICANT FAILS TO STABILIZE THESE SOILS BY THIS DATE, THEN THE APPLICANT WILL TAKE ONE OF THE FOLLOWING ACTIONS TO STABILIZE THE SOIL FOR LATE FALL AND WINTER.
STABILIZE THE SOIL WITH TEMPORARY VEGETATION -- BY OCTOBER 1 THE APPLICANT WILL SEED THE DISTURBED SOIL WITH WINTER RYE AT A SEEDING RATE OF 3 POUNDS PER 1000 SQUARE FEET, LIGHTLY MULCH THE SEEDED SOIL WITH HAY OR STRAW AT 75 POUNDS PER 1000 SQUARE FEET, AND ANCHOR THE MULCH WITH PLASTIC NETTING. THE APPLICANT WILL MONITOR GROUTH OF THE RYE OVER THE NEXT 30 DAYS. IF THE RYE FAILS GROW AT LEAST THREE INCHES OR COVER AT LEAST 75% OF THE DISTURBED SOIL BEFORE NOVEMBER 15, THEN THE APPLICANT WILL MULCH THE AREA FOR OVER-WINTER PROTECTION AS DESCRIBED IN ITEM III OF THIS STANDARD.
STABILIZE THE SOIL WITH SOD -- THE APPLICANT WILL STABILIZE THE DISTURBED SOIL WITH PROPERLY INSTALLED SOD BY OCTOBER 1. PROPER INSTALLATION INCLUDES THE APPLICANT PINNING THE SOD ONTO THE SOIL WITH WIRE PINS, ROLLING THE SOD TO GUARANTEE CONTACT BETWEEN THE SOD AND UNDERLYING SOIL, AND WATERING THE SOD TO PROMOTE ROOT GROUTH INTO THE DISTURBED SOIL.
STABILIZE THE SOIL WITH MULCH -- BY NOVEMBER 15 THE APPLICANT WILL MULCH THE DISTURBED SOIL BY SPREADING HAY OR STRAW AT A RATE OF AT LEAST 150 POUNDS PER 1000 SQUARE FEET ON THE AREA SO THAT NO SOIL IS VISIBLE THROUGH THE MULCH. PRIOR TO APPLYING THE MULCH, THE APPLICANT WILL REMOVE ANY SNOW ACCUMULATION ON THE DISTURBED AREA. IMMEDIATELY AFTER APPLYING THE MULCH, THE APPLICANT WILL ANCHOR THE MULCH WITH PLASTIC NETTING TO PREVENT WIND FROM MOVING THE MULCH OFF THE DISTURBED SOIL.



NOTE: REUSE EXISTING GRANITE CURB WHEN POSSIBLE

SLOPED GRANITE CURB (6x12)

NOT TO SCALE

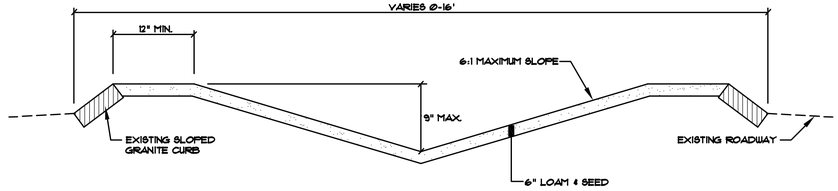


TOP VIEW

SIDE VIEW

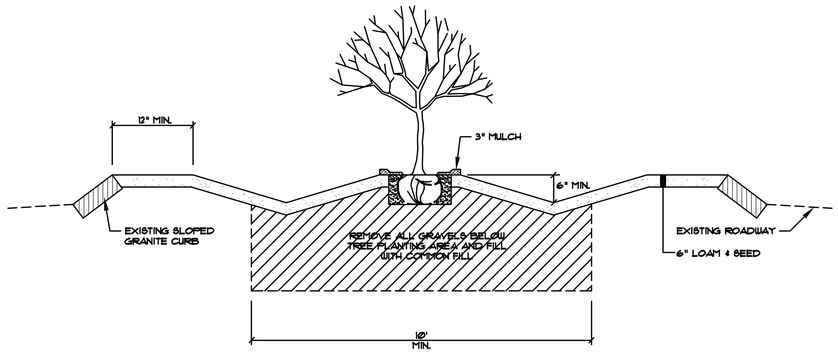
DIRTBAG PUMPED SILT CONTROL SYSTEM

NOT TO SCALE



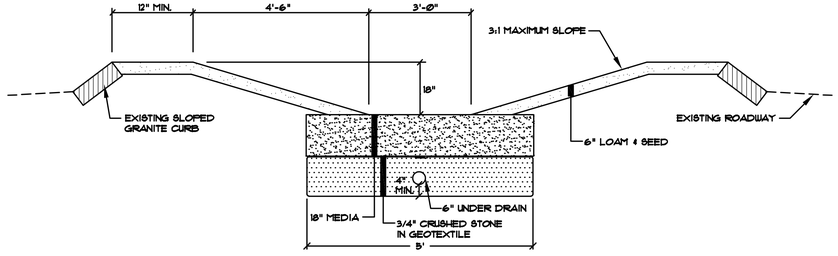
TYPICAL MEDIAN SECTION

NOT TO SCALE



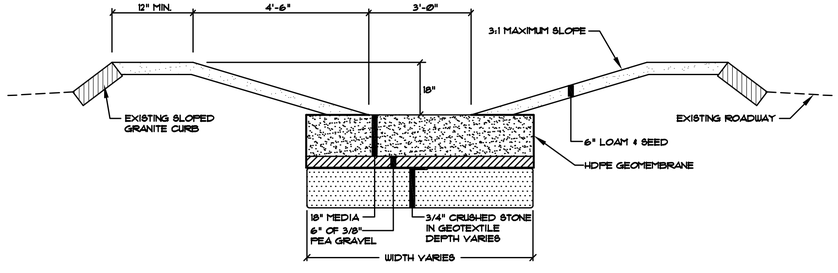
TYPICAL TREE PLANTING SECTION

NOT TO SCALE



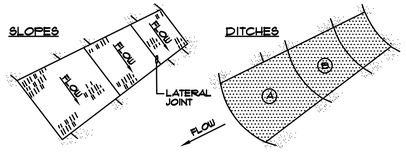
TYPICAL UNDERDRAIN SOIL FILTER DETAIL

NOT TO SCALE



TYPICAL BIORETENTION SYSTEM DETAIL

NOT TO SCALE

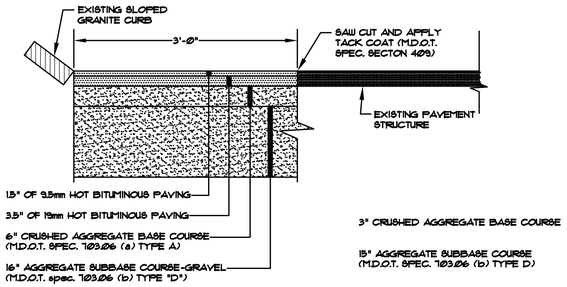


NOTES:

1. BURY THE TOP END OF THE MESH MATERIAL IN A 6" TRENCH AND BACKFILL AND TAMP TRENCHING SECURE END WITH STAPLES AT 6" SPACING, 4" DOWN FROM EXPOSED END.
2. FLOW DIRECTION JOINTS TO HAVE UPPER END OF LOWER STRIP BURIED WITH UPPER LAYERS OVERLAPPED 4" AND STAPLED. OVERLAP B OVER A.
3. LATERAL JOINTS TO HAVE 4" OVERLAP OF STRIPS. STAPLE 18" ON CENTER.
4. STAPLE OUTSIDE LATERAL EDGE 2' ON CENTER.
5. WIRE STAPLES TO BE MIN. OF # 11 WIRE 6" LONG AND 1-1/2" WIDE.
6. USE NORTH AMERICAN GREEN DS 150 OR APPROVED EQUAL.

EROSION CONTROL BLANKET

NOT TO SCALE



TYPICAL PAVEMENT JOINT

NOT TO SCALE

REVISIONS	APP'D	DATE
95% PLANS SUBMISSION	RAM	08-30-13
95% COMMENTS	RAM	09-30-13
BID SET	RAM	03-18-14

DRAWN BY: BRF/JRH
APPROVED BY: —
DATE: —
CHECKED BY: RAM
DATE: —
PROJECT NO. 13125
SCALE: AS NOTED
03-18-14

STATE OF MAINE — ROBERT F. MASOPUST — 10459 — REGISTERED PROFESSIONAL ENGINEER

LONG CREEK WATERSHED MANAGEMENT DISTRICT
35 MAIN STREET
SUITE 3
WINDHAM, MAINE 04062
207-892-4700

LONG CREEK Watershed Management District

CITY OF SOUTH PORTLAND
GORHAM ROAD DRAINAGE IMPROVEMENTS
MEDIAN ALTERATIONS

DETAILS

DWG 14

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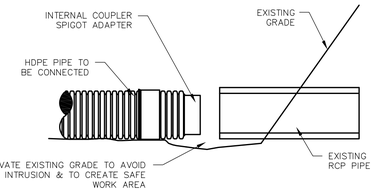
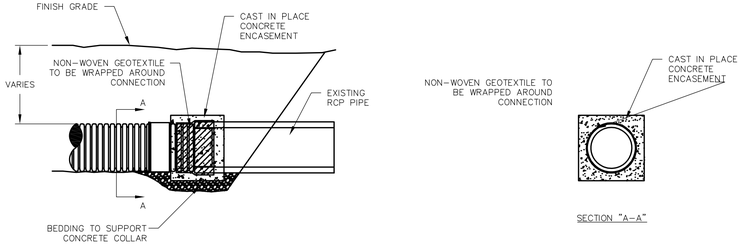
3/18/2014 7:58:11 AM BFARRELL

NOTES:

1. – Connection and pipe to be backfilled per MDOT SPECS.
2. – In lieu of an internal cylinder, an HDPE watertight repair coupler can be used to connect HDPE pipe to CMP.
3. – Internal cylinder adapter is not recommended for downstream connections.

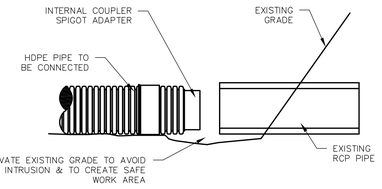


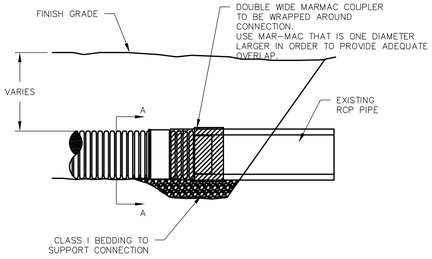


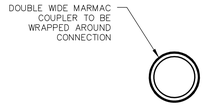
SECTION "A-A"

NOTES:

1. CONNECTION AND PIPE TO BE BACKFILLED PER ASTM D2321, LATEST EDITION.
2. IN LIEU OF AN INTERNAL CYLINDER, AN HDPE WATERTIGHT REPAIR COUPLER CAN BE USED.
3. INTERNAL CYLINDER ADAPTER IS NOT RECOMMENDED FOR DOWNSTREAM CONNECTIONS.

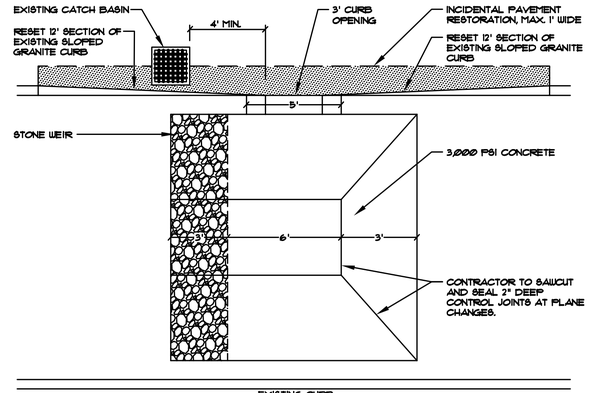


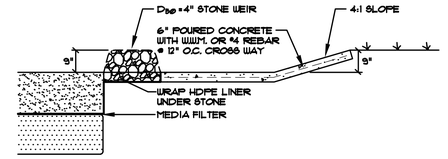




SECTION "A-A"

OPTIONAL



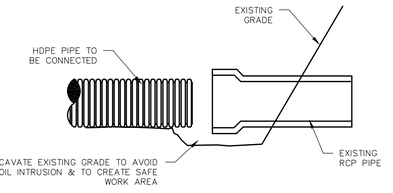


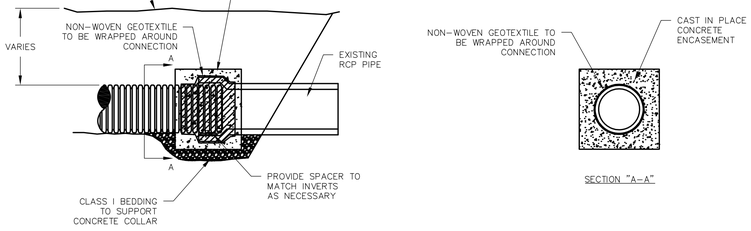
FOREBAY DETAIL

NOT TO SCALE

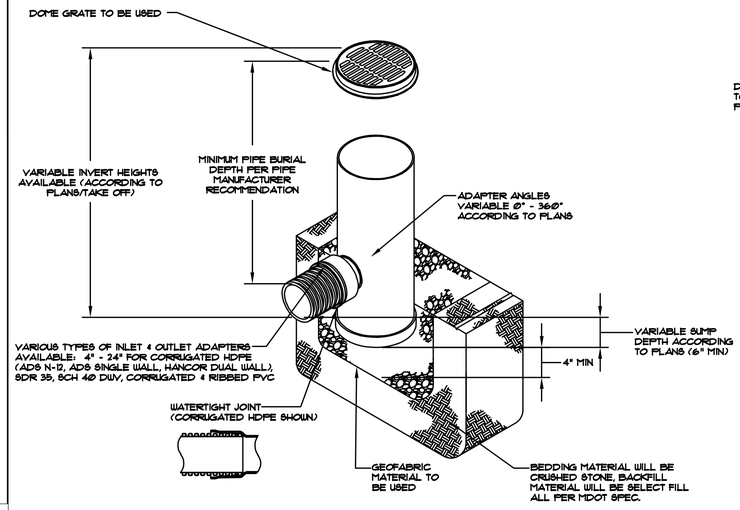
NOTES:

1. CONNECTION AND PIPE TO BE BACKFILLED PER ASTM D2321, LATEST EDITION.
2. IN LIEU OF AN INTERNAL CYLINDER, AN HDPE WATERTIGHT REPAIR COUPLER CAN BE USED.
3. INTERNAL CYLINDER ADAPTER IS NOT RECOMMENDED FOR DOWNSTREAM CONNECTIONS.



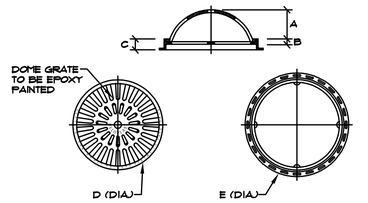


SECTION "A-A"



NYLOPLAST DRAIN BASIN

NOT TO SCALE



MODEL NO.	RIM SIZE	DIMENSIONS IN INCHES					WEIGHT IN LBS.
		A	B	C	D	E	
1299CGD	12"	5	-	-	13.88	-	-
2499CGD	24"	8	1.5	3.04	24.75	28.50	53.0
3099CGD	30"	9	1.75	3.25	31.81	36.00	93.0

NYLOPLAST DOME GRATE

NOT TO SCALE

CONSTRUCTION NOTES FOR UNDERDRAINED SOIL FILTERS & BIORETENTION FILTERS:

1. THE SOIL FILTER MEDIA AND VEGETATION MUST NOT BE INSTALLED UNTIL THE AREA THAT DRAINS TO THE FILTER HAS BEEN PERMANENTLY STABILIZED WITH PAVEMENT OR OTHER STRUCTURE, 90% VEGETATION COVER, OTHER PERMANENT STABILIZATION OR PROTECTION FROM SEDIMENT ACCUMULATING IN THE TREATMENT AREA. OTHERWISE, THE RUNOFF FROM THE CONTRIBUTING AREA MUST BE DIVERTED AROUND THE FILTER UNTIL STABILIZATION IS COMPLETED.
2. INSPECTION OF THE FILTER BASIN SHALL BE PROVIDED FOR EACH PHASE OF CONSTRUCTION BY THE DESIGN ENGINEER OR OWNER REPRESENTATIVE. AT A MINIMUM, THE DESIGN ENGINEER SHALL INSPECT THE CONSTRUCTION AT THE FOLLOWING PHASES:
   A. AFTER PRELIMINARY CONSTRUCTION OF THE FILTER GRADES AND ONCE THE UNDERDRAIN PIPES ARE INSTALLED BUT NOT BACKFILLED.
   B. AFTER THE DRAINAGE LAYER IS CONSTRUCTED AND PRIOR TO THE INSTALLATION OF THE FILTER MEDIA.
   C. AFTER THE FILTER MEDIA HAS BEEN INSTALLED AND SEEDED.
   D. AFTER ONE YEAR TO INSPECT HEALTH OF THE VEGETATION AND MAKE CORRECTIONS.
   E. ALL MATERIAL USED FOR THE CONSTRUCTION OF THE FILTER BASIN SHALL BE APPROVED BY THE DESIGN ENGINEER AFTER TESTS BY A CERTIFIED LABORATORY SHOW THAT THEY ARE PASSING DEP SPECIFICATIONS.
3. SOIL MIX COMPONENTS SHALL BE BLENDED MIXED THOROUGHLY AND UNIFORMLY IN BATCHES NOT TO EXCEED 20 CUBIC YARDS OR AT THE DISCRETION OF THE SUPERVISING ENGINEER.
4. COMPACTION OF THE SOIL BED MATERIAL SHALL BE AVOIDED. IF COMPACTION OCCURS, ROTOTILL AGAIN PRIOR TO SEEDING OR SODDING.
5. THE CONTRACTOR SHALL IDENTIFY THE LOCATION OF THE SOURCE OF EACH COMPONENT OF THE FILTER MEDIA. ALL RESULTS OF THE FIELD AND LABORATORY TESTING SHALL BE SUBMITTED TO THE DESIGN ENGINEER FOR CONFIRMATION. THE CONTRACTOR SHALL
   A. SUBMIT SAMPLES OF EACH TYPE OF MATERIAL TO BE BLENDED FOR THE MIXED FILTER MEDIA AND SAMPLES OF THE UNDERDRAIN BEDDING MATERIAL. SAMPLES MUST BE A COMPOSITE OF THREE GRABS FROM THE STOCKPILE OR PIT FACE. SAMPLE SIZE REQUIRED WILL BE DETERMINED BY THE TESTING LABORATORY.
   B. PERFORM A SIEVE ANALYSIS CONFORMING TO ASTM C136 (STANDARD TEST METHOD FOR SIEVE ANALYSIS OF FINE AND COARSE AGGREGATES, 1996A) ON EACH TYPE OF THE SAMPLE MATERIAL. THE RESULTING SOIL FILTER MEDIA MIXTURE MUST HAVE 6% TO 12% BY WEIGHT PASSING THE #200 SIEVE, A CLAY CONTENT OF LESS THAN 2% (DETERMINED BY HYDROMETER GRAIN SIZE ANALYSIS) AND HAVE 10% DRY WEIGHT OF ORGANIC MATTER.
   C. PERFORM A PERMEABILITY TEST ON THE SOIL FILTER MEDIA CONFORMING TO ASTM D2434 WITH THE MIXTURE COMPACTED TO 90-92% OF MAXIMUM DRY DENSITY BASED ON ASTM D698.
   D. BIORETENTION MEDIA LOAM AND PROCESSED WATER TREATMENT RESIDUALS SHALL BE SUBMITTED FOR APPROVAL FOR THE FOLLOWING TESTS: BASIC COMPOST TEST, SOIL QUALITY ANALYSIS PACKAGE, NUTRIENT MANAGEMENT/GRID SAMPLE PACKAGE WITH MEHLICH-3 EXTRACTION.

UNDERDRAINED & BIORETENTION MEDIA FILTER NOTES:

1. THE UNDERDRAINED SOIL MEDIA SHALL CONSIST OF A SILTY SAND SOIL OR SOIL MIXTURE COMBINED WITH 20% TO 25% BY VOLUME OF A MODERATELY FINE SHREDDED BARK OR WOOD FIBER MULCH. THE RESULTING MIXTURE MUST HAVE NO LESS THAN 8% PASSING THE 200 SIEVE AND SHALL HAVE A CLAY CONTENT OF LESS THAN 2%. THE SAND USED IN THE MIXTURE SHALL MEET THE FOLLOWING SPECIFICATIONS:
   SIEVE 3/8" - 100 PERCENT PASSING
   SIEVE #4 - 95-100 PERCENT PASSING
   SIEVE #8 - 80-100 PERCENT PASSING
   SIEVE #16 - 50-85 PERCENT PASSING
   SIEVE #30 - 25-60 PERCENT PASSING
   SIEVE #50 - 10-30 PERCENT PASSING
   SIEVE #200 - 2-10 PERCENT PASSING
   SIEVE #100 - 0-5 PERCENT PASSING
2. THE BIORETENTION MEDIA SHALL MEET THE FOLLOWING SPECIFICATIONS:

MATERIAL	BSM SPECIFICATION
%SAND	50
%DOUBLE SHREDDED WOOD CHIPS	20
% PROCESSED WATER TREATMENT RESIDUALS	5-10
% LOAMY TOPSOIL	10-15
CEC (MEQ/100 G)	>5
TOTAL PHOSPHORUS (MG/KG)	LESS THAN 100 A
PH	5.5-7.5
ORGANIC MATTER (% DRY WEIGHT)	LESS THAN 10%
INFILTRATION RATE (IN/HR)	GREATER THAN 4
OXALATE RATIO	20-40

3. THE PEA GRAVEL FOR THE BIORETENTION AREAS SHALL MEET THE FOLLOWING SPECIFICATIONS:
   SIEVE 1/2" - 100 PERCENT PASSING
   SIEVE 3/8" - 85-100 PERCENT PASSING
   SIEVE #4 - 10-30 PERCENT PASSING
   SIEVE #8 - 0-10 PERCENT PASSING
   SIEVE #16 - 0-15 PERCENT PASSING

REVISIONS	DATE	APP'D
95% PLANS SUBMISSION	08-30-13	RAM
95% COMMENTS	09-30-13	RAM
BID SET	03-18-14	RAM

DRAWN BY: BRF/JRH
APPROVED BY: –
DATE: –
CHECKED BY: RAM
DATE: –
PROJECT NO. 13125
SCALE: AS NOTED
03-18-14

STATE OF MAINE — ROBERT R. MASOPUST — 10859 — REGISTERED PROFESSIONAL ENGINEER

LONG CREEK WATERSHED MANAGEMENT DISTRICT
35 MAIN STREET
SUITE 3
WINDHAM, MAINE 04062
207-892-4700

LONG CREEK Watershed Management District

CITY OF SOUTH PORTLAND
GORHAM ROAD DRAINAGE IMPROVEMENTS
MEDIAN ALTERATIONS

DETAILS

DWG 15

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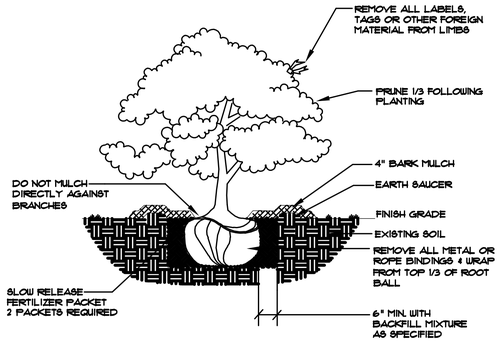
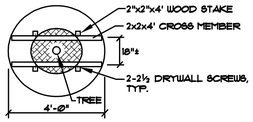
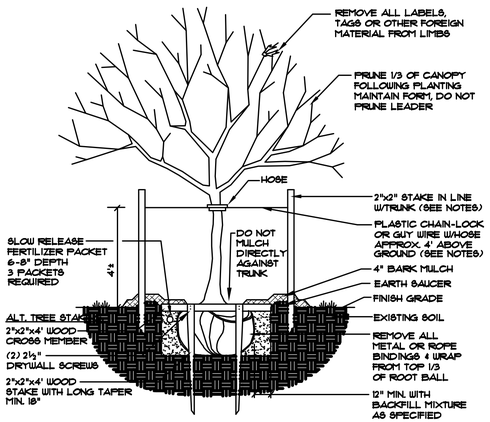


DECIDUOUS & EVERGREEN SHRUB

NOT TO SCALE



ALT. TREE STAKING PLAN
NOT TO SCALE



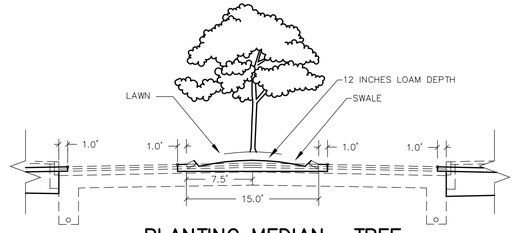
NOTES:

INSTALL STAKES AND GUYS TO TREES IF THE FOLLOWING APPLY:

1. THE TREE IS OF SUBSTANTIAL SIZE.
2. THE PLANTING LOCATION IS EXTREMELY WINDY, AS ON OPEN UNDEVELOPED SITES.
3. THE PLANTING LOCATION IS COMPRISED OF SAND OR OTHER LOOSE TEXTURED SOILS.
4. IF STAKES AND GUYS ARE REQUIRED, REMOVE AFTER ONE YEAR TIME.

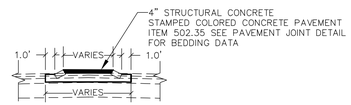
DECIDUOUS TREES 2" TO 4" CALIPER

NOT TO SCALE



PLANTING MEDIAN– TREE

SECTION NTS

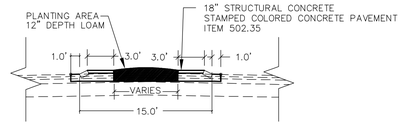


NOTES:

1. CONTRACTOR SHALL SAWCUT 2" DEEP TRANSVERSE CONTROL JOINTS AT A 10' MAXIMUM INTERVAL.
2. CONTRACTOR SHALL INSTALL AND SEAL EXPANSION JOINT MATERIAL BETWEEN PROPOSED MEDIAN AND EXISTING CURB AND AT MAXIMUM 50' INTERVALS.

PLANTING MEDIAN– PAVED

SECTION NTS

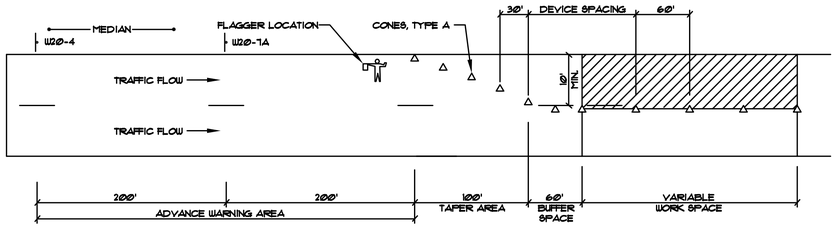


PLANTING MEDIAN– BEDS

SECTION NTS

LANDSCAPE NOTES

1. PLANT QUANTITIES SHOWN ON PLANT LISTS ARE FOR CONVENIENCE TO THE CONTRACTOR ONLY. THE CONTRACTOR IS RESPONSIBLE FOR ALL PLANT MATERIAL INSTALLATION AS SHOWN ON PLANS.
2. SIZE AND GRADING STANDARDS OF PLANT MATERIALS SHALL CONFORM TO THE LATEST EDITION OF "U.S.A. STANDARD FOR NURSERY STOCK," BY THE AMERICAN ASSOCIATION OF NURSERYMEN, INC.
3. ALL PLANT MATERIAL SHALL BE FREE FROM INSECTS AND DISEASE.
4. ALL PLANTING SHALL BE DONE IN ACCORDANCE WITH ACCEPTABLE HORTICULTURAL PRACTICES. THIS IS TO INCLUDE PROPER PLANTING MIX, PLANT BED AND TREE PIT PREPARATION, PRUNING, STAKING OR GUYING, WRAPPING, SPRAYING, FERTILIZATION, PLANTING AND ADEQUATE MAINTENANCE UNTIL ACCEPTANCE BY THE OWNER.
5. PLANT MATERIAL SHALL BE GUARANTEED FOR A PERIOD OF ONE YEAR FROM SUBSTANTIAL COMPLETION BY THE CONTRACTOR AND A PERIOD OF TWO YEARS THEREAFTER BY THE OWNER FROM DATE OF INSTALLATION. DURING THE ONE YEAR GUARANTEE PERIOD, DEAD PLANT MATERIAL SHALL BE REPLACED AT NO COST TO THE OWNER. AT THE END OF THE ONE YEAR PERIOD, THE CONTRACTOR SHALL OBTAIN FINAL ACCEPTANCE FROM THE OWNER.
6. ALL GRASS, OTHER VEGETATION AND DEBRIS SHALL BE REMOVED FROM ALL PLANTING AREAS PRIOR TO PLANTING.
7. EXISTING TREES TO BE PRESERVED WILL BE PROTECTED DURING CONSTRUCTION AND SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR.
8. THE LANDSCAPE CONTRACTOR IS ADVISED OF THE PRESENCE OF THE UNDERGROUND UTILITIES AND SHALL VERIFY THE EXISTENCE AND LOCATION OF SAME BEFORE COMMENCING AND DIGGING OPERATIONS. THE LANDSCAPE CONTRACTOR SHALL REPLACE OR REPAIR UTILITIES, PAVING, WALKS, CURBING, ETC. DAMAGED IN PERFORMANCE OF THIS JOB AT NO ADDITIONAL COST TO THE OWNER.
9. ALL SHRUB BEDS, PERENNIAL BEDS, UNDER DRAIN SOIL FILTERS, BIO-RETENTION AREAS, AND TREE AREAS SHALL BE MULCHED WITH 3" CLEAN SHREDDED DARK BROWN BARK MULCH.
10. THE CONTRACTOR SHALL PROVIDE 6" LOAM FOR ALL AREAS TO BE SODDED OR SEEDED. PLANTING AREAS SHALL RECEIVE 12" ROLLED THICKNESS OF LOAM. THE LANDSCAPE CONTRACTOR SHALL COORDINATE SUBGRADE PREPARATION WITH THE GENERAL CONTRACTOR PRIOR TO PLACING LOAM.
11. ANY DEVIATION FROM THE LANDSCAPE PLAN, INCLUDING PLANT LOCATION, SELECTION, SIZE, QUANTITY OR CONDITION SHALL BE REVIEWED AND APPROVED BY THE OWNER AND LANDSCAPE ARCHITECT (AND MUNICIPAL AUTHORITY, IF APPLICABLE) PRIOR TO INSTALLATION ON SITE.
12. WHERE INDICATED ON PLAN, PLANTING SOIL MIXTURE FOR PERENNIAL AND ANNUAL FLOWER BED AREAS SHALL CONSIST OF FOUR PARTS TOPSOIL, TWO PARTS SPHAGNUM PEAT MOSS, AND ONE PART HORTICULTURAL PERLITE BY VOLUME. PEAT MOSS MAY BE SUBSTITUTED WITH WELL-ROTTED OR DEHYDRATED MANURE OR COMPOST. ROTOTILL BEDS TO A DEPTH OF 8 INCHES.
13. PLANTING OF TREES AND PERENNIAL PLANTS SHALL BE COMPLETED IN SPRING OF 2014.



NOTES:

1. CONTRACTOR SHALL COORDINATE ALL TRAFFIC CONTROL AND LANE CLOSURES WITH THE CITY OF SOUTH PORTLAND POLICE DEPARTMENT.
2. ALL MAINTENANCE OF TRAFFIC SIGNAGE SHALL BE IN ACCORDANCE WITH THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION AND THE CITY OF SOUTH PORTLAND ORDINANCES, CHAPTER 23 STREETS AND SIDEWALKS, ARTICLE 4, EXCAVATION IN PUBLIC PLACES.
3. ANY LANE CLOSURES THAT AFFECT INTERSECTIONS SHALL REQUIRE PRESENCE OF A POLICE OFFICER AND CRUISER.
4. TYPE B CONES SHALL BE USED FOR NIGHT TIME WORK.

TYPICAL LANE CLOSURE FOR MEDIAN WORK

NOT TO SCALE

REVISIONS	APP'D	DATE
95% PLANS SUBMISSION	RAM	08-30-13
95% COMMENTS	RAM	09-30-13
BID SET	RAM	03-18-14

DRAWN BY: BRF/JRH
APPROVED BY: —
DATE: —
CHECKED BY: RAM
DATE: —
PROJECT NO. 13125
SCALE: AS NOTED
03-18-14

STATE OF MAINE — ROBERT M. SOSPEDRA — 10459 — REGISTERED PROFESSIONAL ENGINEER

LONG CREEK WATERSHED MANAGEMENT DISTRICT
35 MAIN STREET
SUITE 3
WINDHAM, MAINE 04062
207-892-4700

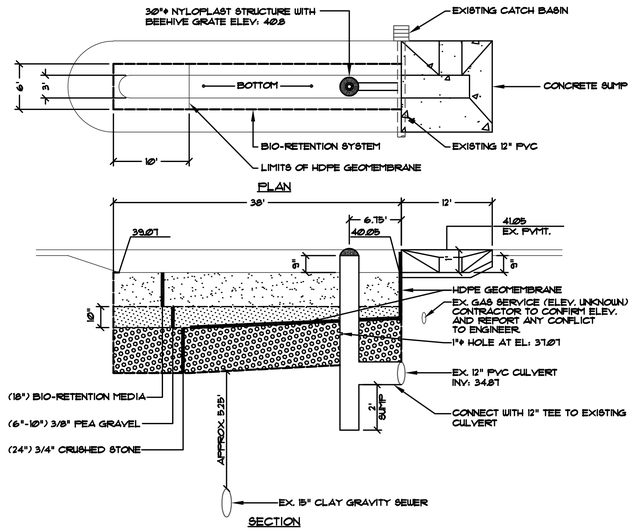
LONG CREEK Watershed Management District

CITY OF SOUTH PORTLAND
GORHAM ROAD DRAINAGE IMPROVEMENTS
MEDIAN ALTERATIONS

DETAILS

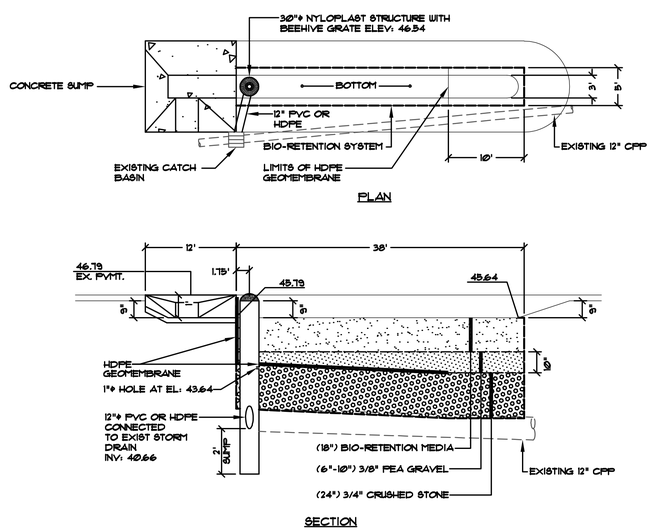
DWG 16

3/18/2014 8:18:35 AM BFARRELL



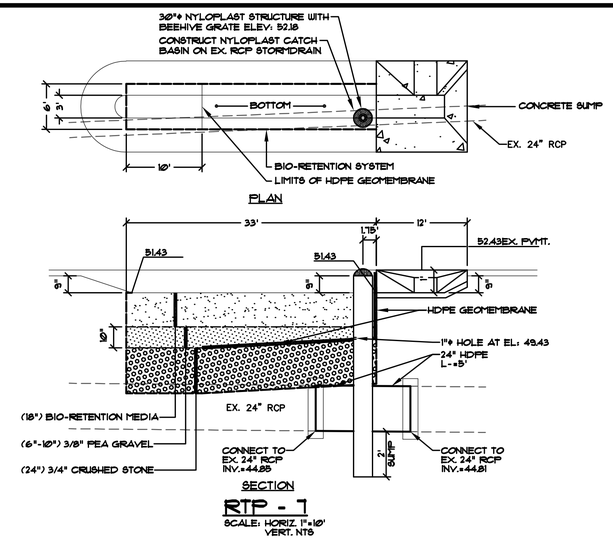
RTP - 1

SCALE: HORIZ. 1"=10'
VERT. NTS



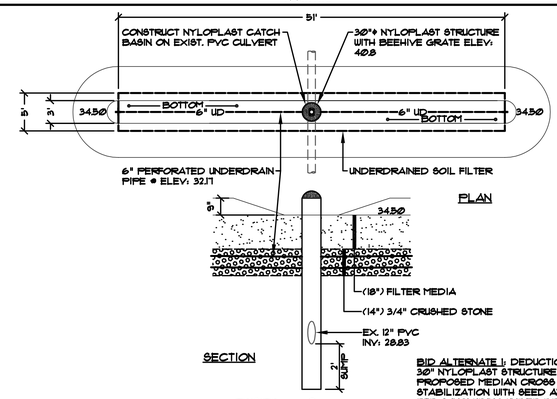
RTP - 4

SCALE: HORIZ. 1"=10'
VERT. NTS



RTP - 7

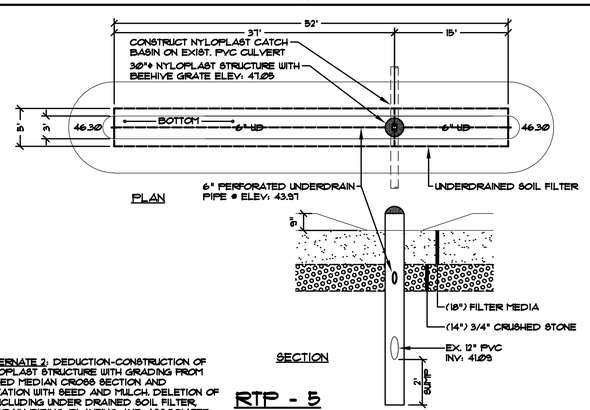
SCALE: HORIZ. 1"=10'
VERT. NTS



RTP - 2

SCALE: HORIZ. 1"=10'
VERT. NTS

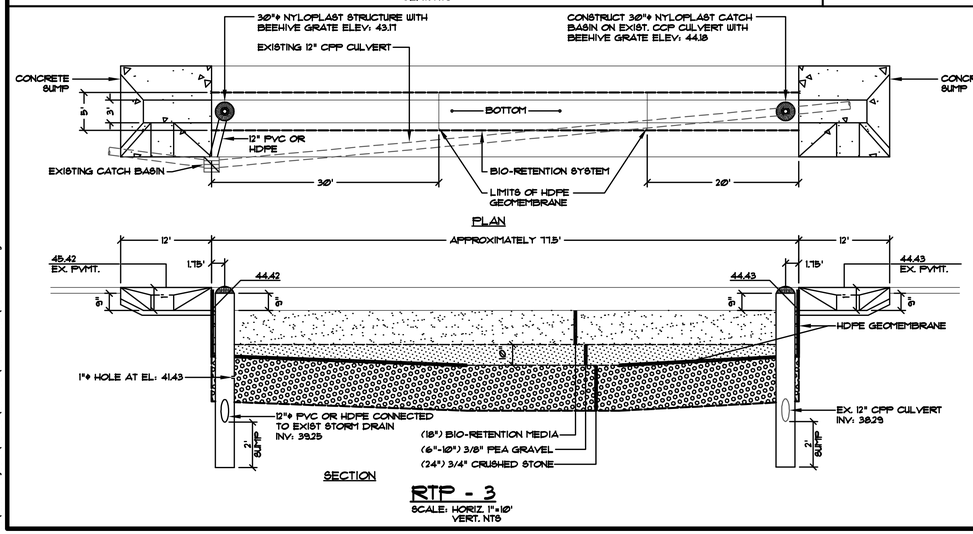
BID ALTERNATE 1: DEDUCTION-CONSTRUCTION OF 30" NYLOPLAST STRUCTURE WITH GRADING FROM PROPOSED MEDIAN CROSS SECTION AND STABILIZATION WITH SEED AND MULCH. DELETION OF RTP-2 INCLUDING UNDER DRAINED SOIL FILTER, UNDER DRAIN PIPING, PLANTING AND ASSOCIATED ESTABLISHMENT PERIOD ALLOWANCE.



RTP - 5

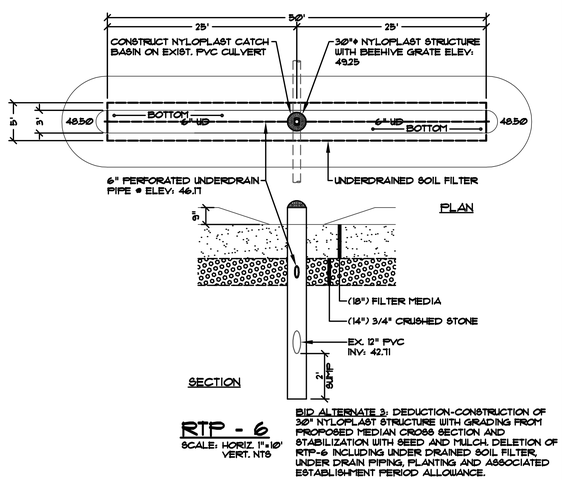
SCALE: HORIZ. 1"=10'
VERT. NTS

BID ALTERNATE 2: DEDUCTION-CONSTRUCTION OF 30" NYLOPLAST STRUCTURE WITH GRADING FROM PROPOSED MEDIAN CROSS SECTION AND STABILIZATION WITH SEED AND MULCH. DELETION OF RTP-5 INCLUDING UNDER DRAINED SOIL FILTER, UNDER DRAIN PIPING, PLANTING AND ASSOCIATED ESTABLISHMENT PERIOD ALLOWANCE.



RTP - 3

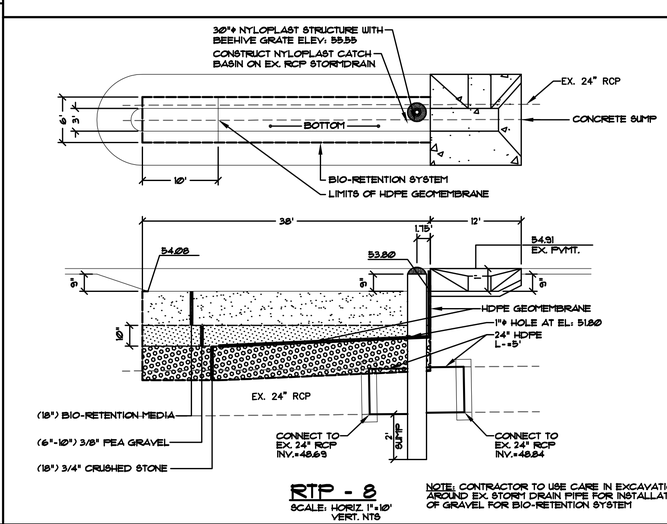
SCALE: HORIZ. 1"=10'
VERT. NTS



RTP - 6

SCALE: HORIZ. 1"=10'
VERT. NTS

BID ALTERNATE 3: DEDUCTION-CONSTRUCTION OF 30" NYLOPLAST STRUCTURE WITH GRADING FROM PROPOSED MEDIAN CROSS SECTION AND STABILIZATION WITH SEED AND MULCH. DELETION OF RTP-6 INCLUDING UNDER DRAINED SOIL FILTER, UNDER DRAIN PIPING, PLANTING AND ASSOCIATED ESTABLISHMENT PERIOD ALLOWANCE.



RTP - 8

SCALE: HORIZ. 1"=10'
VERT. NTS

NOTE: CONTRACTOR TO USE CARE IN EXCAVATION AROUND EX. STORM DRAIN PIPE FOR INSTALLATION OF GRAVEL FOR BIO-RETENTION SYSTEM

REVISIONS	DATE	APP'D
95% PLANS SUBMISSION	09-30-13	RAM
95% COMMENTS	09-30-13	RAM
BID SET	03-18-14	RAM

DRAWN BY: BRF/JRH
APPROVED BY: —
DATE: —
CHECKED BY: RAM
DATE: —
PROJECT NO. 13125
SCALE 1"=10'
03-18-14

STATE OF MAINE ROBERT F. MASOPUST 10859 REGISTERED PROFESSIONAL ENGINEER

LONG CREEK WATERSHED MANAGEMENT DISTRICT
35 MAIN STREET
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STORMWATER DETAILS

DWG 17

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