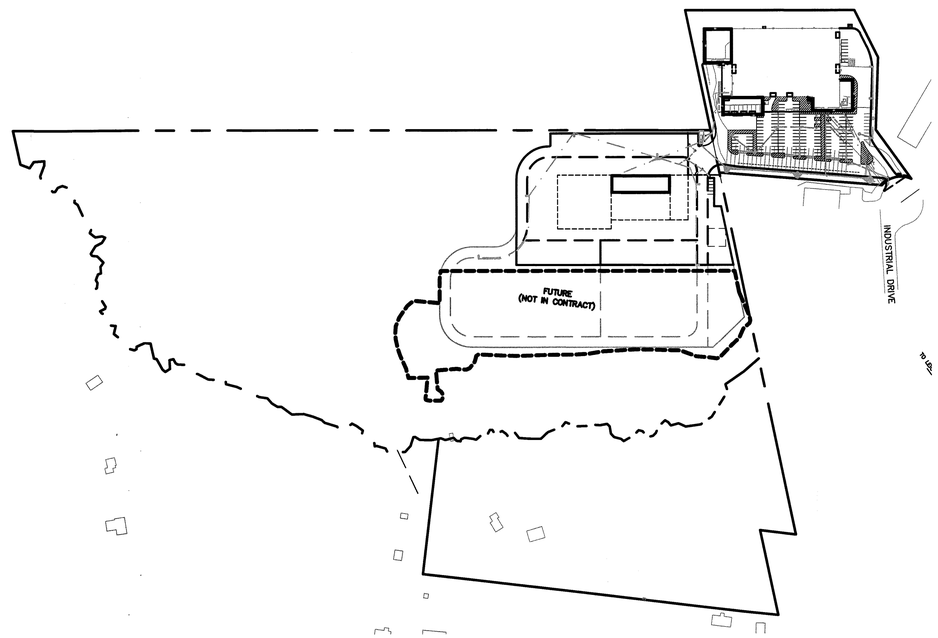
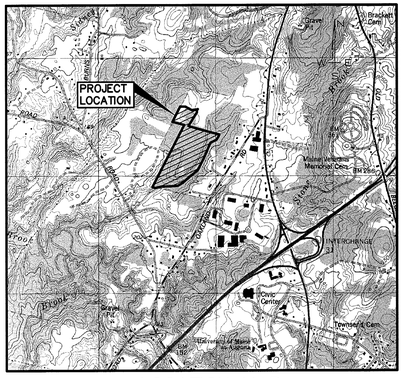
66 INDUSTRIAL DRIVE - PHASE 1

66 INDUSTRIAL DRIVE, AUGUSTA, MAINE
MAINE DEPARTMENT OF TRANSPORTATION

PROJECT PARCEL SITE AUGUSTA ASSESSOR'S MAP & LOT NUMBERS	
MAP	LOT
5	208
79	26

Applicant:
MAINE DOT
16 STATE HOUSE STATION
AUGUSTA, MAINE 04333





LOCATION MAP

A PORTION OF AUGUSTA MAINE

SHEET INDEX

C001	COVER SHEET
	BOUNDARY SURVEY
C002	GENERAL NOTES & LEGEND
C003	PHASING PLAN
C004	DEMOLITION PLAN
C100	SITE PLAN – OVERALL
C101	SITE PLAN – NORTH
C102	SITE PLAN – SOUTH
C200	UTILITY PLAN – OVERALL
C201	UTILITY PLAN – NORTH
C201	UTILITY PLAN – SOUTH
C300	GRADING & DRAINAGE PLAN – OVERALL
C301	GRADING & DRAINAGE PLAN – NORTH
C302	GRADING & DRAINAGE PLAN – SOUTH
C401	STORM DRAIN PROFILES
C402	STORM DRAIN PROFILES
C403	SANITARY SEWER PROFILES
C500	SITE DETAILS
C501	UTILITY DETAILS
C502	DRAINAGE/UTILITY DETAILS
C503	DRAINAGE, EROSION & SEDIMENTATION CONTROL DETAILS
C504	EROSION & SEDIMENTATION CONTROL NOTES
C505	WET POND PLAN & DETAILS
L101	LANDSCAPE PLAN
ESD100	ELECTRICAL SITE DEMOLITION PLAN
ES100	ELECTRICAL SITE PLAN PART 1
ES101	ELECTRICAL SITE PLAN PART 2
ES500	ELECTRICAL SITE DETAILS

COMMISSIONER

ISSUED FOR BID
FEBRUARY 5, 2014

Gorrill–Palmer Consulting Engineers, Inc.
PO Box 1237 *Engineering Excellence Since 1998* 207–657–6910
15 Shaker Road FAX: 207–657–6912
Gray, ME 04039 E–Mail: mailbox@gorrillpalmer.com

Allied Engineering
Structural Mechanical Electrical Commissioning
160 Veranda Street
Portland, Maine 04103
207.221.2260
207.221.2266
www.allied-eng.com

Allied Project No: 13057 Cad File:

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

	DATE
COMMISSIONER:	2/4/14
CHIEF ENGINEER:	2-4-14

STATE OF MAINE
WILLIAM C. HASKELL
No. 8839
12/31/2014
LICENSED
PROFESSIONAL ENGINEER

INFORMATION		SIGNATURE
PROJECT MANAGER	ALLIED ENG., INC.	–
DESIGNER	GORRILL–PALMER	ARCH. LIN. NUMBER
CONSULTANT		
PROJECT RESIDENT		DATE FEBRUARY 5, 2014
CONTRACTOR		
PROJECT COMPLETION DATE	–	

PIN NO: 020118.00

66 INDUSTRIAL DRIVE–PHASE 1
66 INDUSTRIAL DRIVE, AUGUSTA, MAINE
MAINE DEPARTMENT OF TRANSPORTATION

COVER SHEET

SHEET NUMBER
C001

© COPYRIGHT 2013 ALLIED ENGINEERING, INC.

U:\2798_Allied Engineering_MaineDOT Fleet Services\Z - CAD\dwg\2798-COVER.dwg Feb 04, 2014 - 9:01am

LEGEND

- Survey Control Point
- Iron Rod/Pipe Found
- 3/4" Rebar set with Survey ID Cap
- Hydrant
- Water Valve
- Sign
- Underground Gas Valve
- Manhole (Storm/Sewer)
- Utility Pole
- Guy Wire
- Pavement
- Concrete Pad
- Overhead Utility Wires
- Underground Utilities
- Storm Drain
- Water Line
- Sanitary Sewer
- Underground Gas Line
- Boundary (See Note 8)
- Deed Line
- Lines scaled from Tax Map
- Easement
- Right of Way (See Note 6)
- Stream
- Barbed Wire Fence
- Chain Link Fence

CERTIFICATION

SHYKA, SHEPPARD & GARSTER, Land Surveyors, hereby certifies to the Maine Department of Transportation, exclusively, that to the best of our knowledge and belief this survey conforms to Standards of Practice adopted by the Maine Board of Licensure for Professional Land Surveyors, except as stated in note 8.

SHYKA, SHEPPARD & GARSTER

LAND SURVEYORS
STATE OF MAINE
ROBERT J. GARSTER, JR.
2047
PROFESSIONAL LAND SURVEYOR

Robert J. Garster, Jr.
Maine Professional Land Surveyor #2047

NOTES

1. Title Reference for Surveyed Parcel:
Kennebec County Registry of Deeds, Book 11222, Page 73 (Ruby Lot); and Book 10066, Page 283 (Estes Express Lines Lot).

2. Plan References:
A. "Plan of Leon Small Lands," prepared by John L. Collins, Consulting Engineer, dated October 22, 1969, recorded in KCRD Plan File C-85210.

B. "Subdivision Plan - J & D Business Park," prepared by Thayer Engineering Co., dated December 1988, recorded in KCRD Plan File E-89019.

C. "Subdivision Amendment - J and D Business Park," prepared by Malcolm E. Hartman, Professional Land Surveyor, dated May 2, 1997, recorded in KCRD Plan Book E97, Page 156.

D. "Plan of Standard Boundary Survey - Cecil B. Quimby, Oakland Road, Augusta, ME," prepared by Thayer Engineering Co., dated May 31, 2000, recorded in KCRD Plan Book E2000, Page 063.

E. "Amended Subdivision Plan - J & D Business Park, Lot 5/6," prepared by Thayer Engineering Co., dated April 6, 2001, recorded in KCRD Plan Book E2001, Page 064.

F. "Standard Boundary Survey - Tammy L. Neimi & Loren Neimi," prepared by Wayne P. Libby, Professional Land Surveyor, dated October 2007, recorded in KCRD Plan Book 2009, Page 79.

G. State of Maine Department of Transportation Right of Way Map State Aid Highway No. "9", Project No. F02-09(501), dated September 1977, DOT File No. S-6-264.

3. Area Information:
Ruby Lot Area = 43.67± acres
Estes Lot Area = 5.305 acres
Total Area = 48.98± acres

4. Tax Map Reference:
City of Augusta Tax Map 5, Lot 114 & Lot 208; and Tax Map 79, Lot 26.

5. Basis of Bearings:
Bearings shown on this plan refer to Grid North (NAD83, Maine West 2000 Zone) based on GPS network observations taken April 24, 2013 (Distances shown are ground distances.)

6. Road Information:
Meadow Brook Road: The location shown on this plan for Meadow Brook Road is based on the plans in Note 2 and on iron rods found. Meadow Brook Road is 40 feet wide, and was accepted as a public easement on November 3, 2005 (See KCRD Book 8897, Pages 13-16). The 40 ft wide strip to the brook from Leighton Road was reserved in the outconveyances from Hescock, however, only a portion was accepted by the City. No further outconveyances or dedications were found in the course of this survey.

Industrial Drive: The location shown on this plan for Industrial Drive is based on the plans in Note 2 and on iron rods found. Industrial Drive is generally 60 feet wide, as shown on the plans in Note 2. Industrial Drive was accepted as a City Street December 17, 1990 (See City Road Book 1923-199_, Page 228. See Also KCRD Book 3847, Page 186 and Book 4055, Page 63).

7. Utility Information:
The location shown on this plan for above and underground utilities, Including water, electricity, telephone, sewer, and storm drains are approximate and should be verified before any excavation. Federal and State Laws require anyone performing any sort of excavation. Including digging, boring, backfilling or grading to notify "DIG SAFE", (1-888-344-7233), at least 72 hours before they begin work.
The underground utilities shown, if any, have been located from field survey information and existing drawings. Shyka, Sheppard & Garster, Land Surveyors (SSG) makes no guarantee that the underground utilities shown comprise all such utilities in the area, either in service or abandoned, SSG further does not warrant that the underground utilities shown are in the exact location indicated although SSG does certify that they are located as accurately as possible from information available. SSG has not physically located the underground utilities.

8. Some variations between distances and bearings shown hereon and those contained in previous deeds and plans are not noted because such variations are: insignificantly small, due to obvious scriivener's errors, or due to the basis of bearings shown. No report was prepared and monuments were set only as shown.

9. Abutting property owner information was taken from City of Augusta tax records. Abutting property owner property lines shown on this plan were scaled from the respective tax maps.

10. The noted area was granted in an easement to Joseph J. Ruby by Andrew Sayers and Annabelle Sayers in KCRD Book 2184, Page 74 on February 15, 1979 to "construct and maintain a road embankment". There is no visible evidence that a road was ever built in this area.

11. Multiple easements and restrictive covenants affect this parcel. See KCRD Book 3550, Page 86; Book 3551, Page 267; Book 5381, Page 280; and Book 3955, Page 92.

12. Some of the parcels on Leighton Road reference lot numbers indicating that a subdivision plan may exist of these lots. No such plan was found in the Kennebec County Registry of Deeds.

13. Multiple trails and points of access to the properties were observed in the course of this survey. The extents of the these trails, and any rights associated with them, were not investigated.

OWNERS OF RECORD:

Heirs of Betty Jane Ruby	Estes Express Lines
145 Hannaford Hill Road	3901 W. Broad Street
Vassalboro, ME 04989	Richmond, VA 23230

0' 100' 200'
GRAPHIC SCALE

BOUNDARY SURVEY OF THE

RUBY & ESTES PROPERTIES

Industrial Drive, Augusta, Kennebec County, ME

- Prepared for -

MAINE DEPARTMENT OF TRANSPORTATION

16 State House Station

Augusta, ME 04333

DATE: April 25, 2013	SCALE: 1" = 100'

Prepared By

SHYKA, SHEPPARD & GARSTER

LAND SURVEYORS
6 STATE STREET, SUITE 301
BANGOR, MAINE 04401
TEL: (207) 942-1955

BOOK: CRLSN	FILE: 13-106	SHEET 1 OF 1

GENERAL NOTES

GENERAL NOTES

1. TOPOGRAPHIC DATA AND EXISTING CONDITIONS WAS PREPARED BY SHYKA, SHEPPARD & GARSTER OF BANGOR MAINE.
2. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR THE ELEVATION OF THE EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND WHERE POSSIBLE MEASUREMENTS TAKEN IN THE FIELD. THIS INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AND DIG SAFE AT LEAST 72 HOURS PRIOR TO ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.
3. MAINTENANCE OF EROSION CONTROL MEASURES IS OF PARAMOUNT IMPORTANCE TO THE OWNER AND THE CONTRACTOR IS RESPONSIBLE FOR COMPLYING WITH ALL EROSION CONTROL MEASURES SHOWN ON THE PLANS. ADDITIONAL EROSION CONTROL MEASURES SHALL BE INSTALLED IF DEEMED NECESSARY BY ON-SITE INSPECTIONS OF THE OWNER OR THEIR REPRESENTATIVES AT NO ADDITIONAL COST TO THE OWNER.
4. ALL MATERIAL SCHEDULES SHOWN ON THE PLANS ARE FOR GENERAL INFORMATION ONLY. THE CONTRACTOR SHALL PREPARE HIS OWN MATERIAL SCHEDULES BASED UPON HIS PLAN REVIEW. ALL SCHEDULES SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO ORDERING MATERIALS OR PERFORMING WORK.
5. ALL MATERIALS AND CONSTRUCTION METHODS SHALL CONFORM TO MAINE DEPARTMENT OF TRANSPORTATION SPECIFICATIONS, AND/OR THE PROJECT SPECIFICATIONS.
6. WETLAND LOCATIONS SHOWN ON THIS PLAN WERE PROVIDED BY MAINE DOT.

PERMITTING NOTES

1. THIS PROJECT IS SUBJECT TO THE TERMS AND CONDITIONS OF A SITE LOCATION OF DEVELOPMENT ACT – AMENDMENT AND NRPA PERMIT FROM MAINE DEPARTMENT OF ENVIROMENTAL PROTECTION.
2. THIS PROJECT IS SUBJECT TO THE TERMS AND CONDITIONS OF A MAJOR DEVELOPMENT PERMIT FROM THE CITY OF AUGUSTA.
3. THE CONTRACTOR SHALL REVIEW THE ABOVE REFERENCED PERMITS PRIOR TO SUBMITTING A BID FOR THIS PROJECT, AND INCLUDE COSTS AS NECESSARY TO COMPLY WITH THE CONDITIONS OF THESE PERMITS.

LAYOUT NOTES

1. ALL DIMENSIONING, UNLESS NOTED OTHERWISE, IS TO THE FACE OF CURB.
2. OFFSETS TO CATCH BASINS AND MANHOLES ARE TO THE CENTER OF THE FRAME.
3. PIPE LENGTH EQUALS THE CENTER TO CENTER DISTANCES BETWEEN CATCH BASINS AND/OR MANHOLES MINUS ONE-HALF OF THE DIAMETER OF EACH CATCH BASIN OR MANHOLE.
4. PROPERTY LINE AND R.O.W. MONUMENTS SHALL NOT BE DISTURBED BY CONSTRUCTION. IF DISTURBED, THEY SHALL BE RESET TO THEIR ORIGINAL LOCATIONS AT THE CONTRACTOR'S EXPENSE, BY A MAINE LICENSED LAND SURVEYOR.
5. PROPOSED RIGHT OF WAY MONUMENTS AND PROPERTY LINE PINS SHALL BE INSTALLED UNDER THE DIRECTION OF A MAINE LICENSED LAND SURVEYOR.

UTILITY NOTES

1. ALL WATER UTILITY MATERIALS AND INSTALLATION METHODS SHALL CONFORM TO GREATER AUGUSTA UTILITY DISTRICT SPECIFICATIONS. DISINFECTION OF WATER LINES SHALL CONFORM TO AWWA STANDARD C651, LATEST REVISION.
2. THE LOCATION OF THE PROPOSED UNDERGROUND ELECTRICAL SERVICE IS APPROXIMATE AND THE CONTRACTOR SHALL COORDINATE THE EXACT LOCATION WITH ELECTRICAL SITE PLAN CENTRAL MAINE POWER.
3. TEST PITS AT ALL UTILITY CROSSINGS SHALL BE COMPLETED TWO WEEKS IN ADVANCE OF THE START OF CONSTRUCTION OR ORDERING OF MATERIALS. TEST PIT INFORMATION SHALL BE PROMPTLY PROVIDED TO ENGINEER FOR REVIEW.

GRADING AND DRAINAGE NOTES

1. UNLESS OTHERWISE NOTED, ALL STORM DRAIN PIPE SHALL BE IN ACCORDANCE WITH MAINE DOT SPECIFICATIONS SECTION 603-- PIPE CULVERTS AND STORM DRAINS, LATEST REVISION WITH THE EXCEPTION THAT THE ONLY ACCEPTABLE TYPES OF PIPE ARE AS FOLLOWS:

   REINFORCED CONCRETE PIPE, CLASS III
   POLYVINYL-CHLORIDE (PVC) PIPE
   SMOOTH BORE POLYETHYLENE – ADS OR HANCOR

2. TOPSOIL STRIPPED IN AREAS OF CONSTRUCTION THAT IS SUITABLE FOR REUSE AS LOAM SHALL BE STOCKPILED ON SITE AT A LOCATION TO BE DESIGNATED BY THE OWNER. UNSUITABLE SOIL SHALL BE SEPARATED, REMOVED AND DISPOSED OF AT AN APPROVED DISPOSAL LOCATION OFF SITE.
3. THE CONTRACTOR SHALL ANTICIPATE THAT GROUNDWATER WILL BE ENCOUNTERED DURING CONSTRUCTION AND SHALL INCLUDE SUFFICIENT COSTS WITHIN THEIR BID TO PROVIDE DEWATERING AS NECESSARY. NO SEPARATE PAYMENT SHALL BE MADE TO THE CONTRACTOR FOR DEWATERING.

EROSION CONTROL NOTES

1. LAND DISTURBING ACTIVITIES SHALL BE ACCOMPLISHED IN A MANNER AND SEQUENCE THAT CAUSES THE LEAST PRACTICAL DISTURBANCE OF THE SITE.
2. PRIOR TO BEGINNING ANY CLEARING/LAND DISTURBING ACTIVITIES, THE CONTRACTOR SHALL INSTALL THE PERIMETER SILT FENCES AND THE CONSTRUCTION ENTRANCE.
3. ALL GROUND AREAS DISTURBED FOR CONSTRUCTION WILL BE GRADED, LOAMED AND SEEDED AS SOON AS POSSIBLE. PERMANENT SEED MIXTURE SHALL CONFORM TO THE SEEDING PLAN CONTAINED IN THE EROSION CONTROL NOTES INCLUDED ON SHEET C504.
4. PRIOR TO PAVING, THE CONTRACTOR SHALL FLUSH SEDIMENT FROM ALL STORM DRAIN LINES, REMOVE ACCUMULATED SEDIMENT FROM SUMPS AND INVERTS AND PROPERLY DISPOSE OF.
5. ALL CATCH BASINS WITH OUTLET PIPES 18" DIAMETER OR LESS SHALL BE PROVIDED WITH A "SNOUT" SEDIMENTATION HOOD PER DETAIL.
6. SILT FENCES SHALL BE INSPECTED, REPAIRED AND CLEANED AS NOTED IN THE EROSION CONTROL NOTES.
7. THE CONTRACTOR SHALL REPAIR AND ADD STONE TO THE CONSTRUCTION ENTRANCE AS IT BECOMES SATURATED WITH MUD TO ENSURE THAT IT WORKS AS PLANNED DURING CONSTRUCTION.
8. SILT REMOVED FROM AROUND INLETS AND BEHIND THE SILT FENCES SHALL BE PLACED ON A TOPSOIL STOCKPILE AND MIXED INTO IT FOR LATER USE IN LANDSCAPING OPERATIONS.
9. EROSION CONTROL NOTES ACCOMPANY THIS PLAN SET AND ARE CONTAINED ON DRAWING C504 OF THIS PLAN SET.
10. THE MAINTENANCE SCHEDULE FOR THE CATCH BASIN SEDIMENT SUMPS IS CONTAINED IN THE EROSION CONTROL NOTES INCLUDED ON SHEET C504.
11. THE CONTRACTOR IS CAUTIONED THAT FAILURE TO COMPLY WITH THE SEQUENCE OF CONSTRUCTION, EROSION/SEDIMENT CONTROL PLAN, AND OTHER PERMIT REQUIREMENTS BASED UPON ANY THIRD PARTY REVIEW (ie MDEP) MAY RESULT IN MONETARY PENALTIES. THE CONTRACTOR SHALL BE ASSESSED ALL SUCH PENALTIES AT NO COST TO THE OWNER OR PERMITTEE.
12. ALL NON-PAVED AREAS DISTURBED DURING CONSTRUCTION SHALL BE LOAMED AND SEEDED, UNLESS OTHERWISE DIRECTED BY THE OWNER.
13. ALL DISTURBED AREAS ARE TO RECEIVE A MINIMUM OF 4" OF TOPSOIL PRIOR TO PERMANENT SEEDING.

LEGEND

EXISTING	DESCRIPTION	PROPOSED
	BUILDING	
	RIGHT OF WAY	
	PROPERTY LINE	
	BUILDING SETBACK	
	ZONE LINE	
	WETLAND BOUNDARY	
	GUIDE RAIL	
	EDGE OF PAVEMENT	
	EDGE OF GRAVEL DRIVE	
100	GRADING CONTOUR LINE	100
X 226.4	SPOT ELEVATION	+ 100.31
	TREELINE	
	TREES & HEDGES	
	POLE WITH LIGHT FIXTURE(S)	
	UTILITY POLE	
	FREESTANDING SIGN	
	PAINTED DIRECTIONAL TRAFFIC ARROW	
OE	OVERHEAD ELECTRIC/TELEPHONE	OHE/T
UE	UNDERGROUND ELECTRIC/TELEPHONE	UGE/T
W	WATER LINE	8"W
D	STORM DRAIN LINE	18"SD
	CULVERT	18"CULVERT
	HYDRANT	
WV	WATER GATE VALVE	
	WATER SHUT OFF VALVE	
	MANHOLE	
	CATCH BASIN	
	TEST PIT	
	IRON ROD (SET)	
	IRON ROD (FOUND)	
	MONUMENT	
	RIPRAP	
	SILT FENCE – PERIMETER	
	STONE SEDIMENT BARRIER	
x x	FENCE	
W	WELL	

PERMITS

TYPE OF PERMIT	GOVERNING BODY	STATUS
SITE LOCATION OF DEVELOPMENT ACT – AMENDMENT	MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION 106 HOGAN ROAD BANGOR MAINE 04401	SUBMITTED: SEPTEMBER 2013 APPROVED: NOVEMBER 2013
NRPA INDIVIDUAL PERMIT	MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION 106 HOGAN ROAD BANGOR MAINE 04401	SUBMITTED SEPTEMBER 2013 APPROVED: PENDING
SECTION 404 – WETLANDS	US ARMY CORPS OF ENGINEERS	SUBMITTED: SEPTEMBER 2013 APPROVED: NOVEMBER 12, 2013
MAJOR DEVELOPMENT	CITY OF AUGUSTA 16 CONY STREET AUGUSTA MAINE 04330	SUBMITTED: OCTOBER 2013 APPROVED: NOVEMBER 12, 2013

CALL BEFORE YOU DIG
1-888-344-7233

ISSUED FOR BID
FEBRUARY 5, 2014

Gorrill-Palmer Consulting Engineers, Inc.
PO Box 1237 *Engineering Excellence Since 1998* 207-657-6910
15 Shaker Road FAX: 207-657-6912
Gray, ME 04039 E-Mail: mailbox@gorrillpalmer.com

Allied Engineering
Structural Mechanical Electrical Commissioning
160 Veranda Street
Portland, Maine 04103
207.221.2260
207.221.2266
www.allied-eng.com

Allied Project No: 13057 Cad File:

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

DATE
COMMISSIONER:
CHIEF ENGINEER:

STATE OF MAINE
WILLIAM C. HASKELL
No. 8518
1/27/2014
LICENSED
PROFESSIONAL ENGINEER

PROJECT INFORMATION		
PROGRAM		SIGNATURE
PROJECT MANAGER		–
DESIGNER	ALLIED ENG., INC.	ARCH. LIN. NUMBER
CONSULTANT	GORRILL-PALMER	
PROJECT RESIDENT		DATE FEBRUARY 5, 2014
CONTRACTOR		
PROJECT COMPLETION DATE	–	

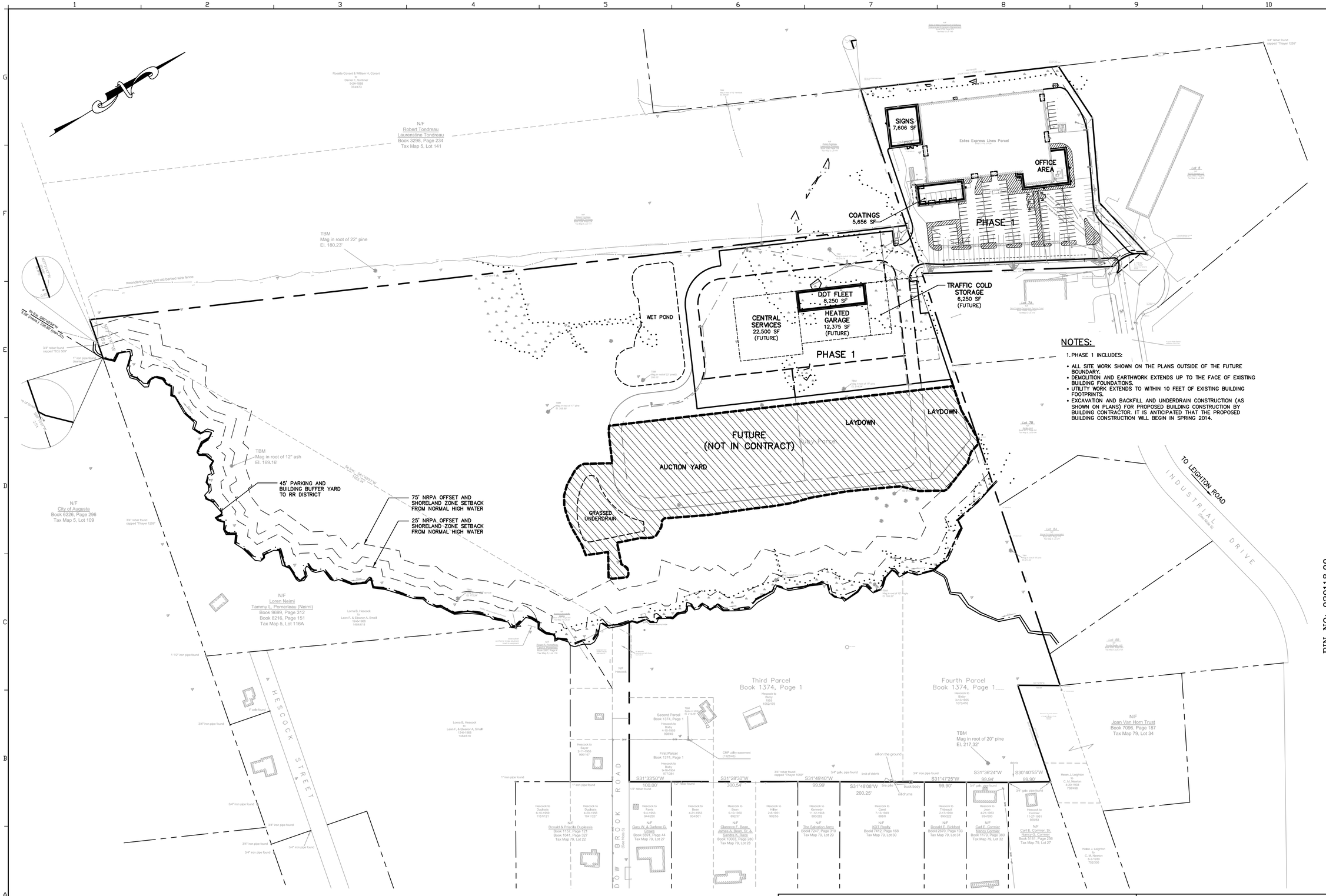
PIN NO: 020118.00

66 INDUSTRIAL DRIVE-PHASE 1
66 INDUSTRIAL DRIVE, AUGUSTA, MAINE
MAINE DEPARTMENT OF TRANSPORTATION

GENERAL NOTES & LEGEND

SHEET NUMBER
C002

U:\2798_Allied Engineering_MaineDOT Fleet Services\Z - CAD\dwg\2798-NOTES.dwg Feb 04, 2014 - 9:01am



NOTES:

1. PHASE 1 INCLUDES:
   - ALL SITE WORK SHOWN ON THE PLANS OUTSIDE OF THE FUTURE BOUNDARY.
   - DEMOLITION AND EARTHWORK EXTENDS UP TO THE FACE OF EXISTING BUILDING FOUNDATIONS.
   - UTILITY WORK EXTENDS TO WITHIN 10 FEET OF EXISTING BUILDING FOOTPRINTS.
   - EXCAVATION AND BACKFILL AND UNDERDRAIN CONSTRUCTION (AS SHOWN ON PLANS) FOR PROPOSED BUILDING CONSTRUCTION BY BUILDING CONTRACTOR. IT IS ANTICIPATED THAT THE PROPOSED BUILDING CONSTRUCTION WILL BEGIN IN SPRING 2014.

ISSUED FOR BID
FEBRUARY 5, 2014

Gorrill-Palmer Consulting Engineers, Inc.
PO Box 1237
15 Shaker Road
Gray, ME 04039
Engineering Excellence Since 1998
207-657-6910
FAX: 207-657-6912
E-Mail: mailbox@gorrillpalmer.com

Allied Engineering
Structural Mechanical Electrical Commissioning
160 Veranda Street
Portland, Maine 04103
207.221.2260
207.221.2266
www.allied-eng.com

Allied Project No: 13057 Cad File:

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

	DATE
COMMISSIONER:	
CHIEF ENGINEER:	

STATE OF MAINE
WILLIAM C. HASKELL
No. 8518
LICENSED
PROFESSIONAL ENGINEER
12/7/2013

INFORMATION		SIGNATURE
PROJECT PROGRAM		–
PROJECT MANAGER	ALLIED ENG., INC.	ARCH. LIN. NUMBER
DESIGNER	GORRILL-PALMER	
CONSULTANT		DATE FEBRUARY 5, 2014
PROJECT RESIDENT		
CONTRACTOR		
PROJECT COMPLETION DATE	–	

PIN NO: 020118.00

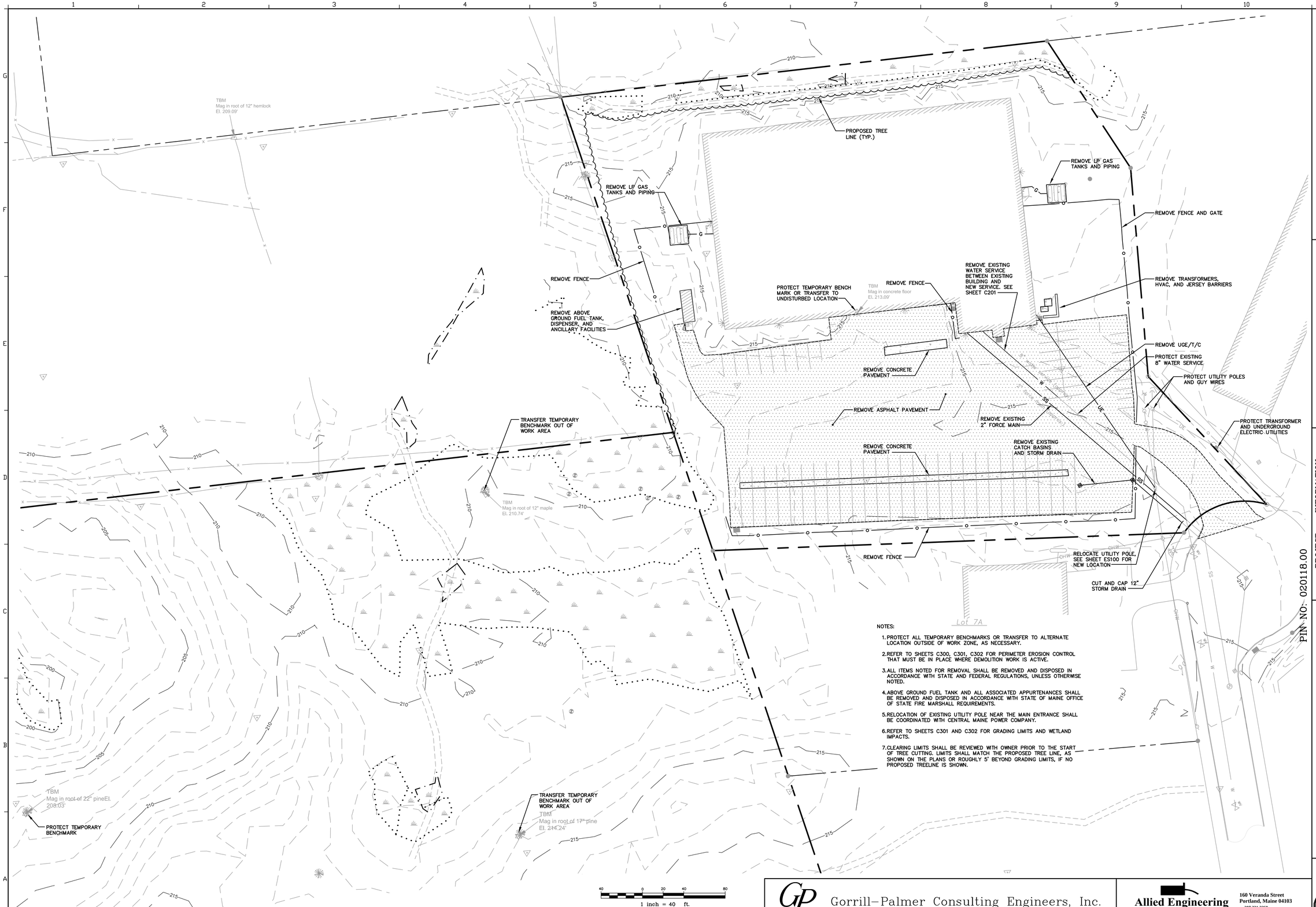
66 INDUSTRIAL DRIVE-PHASE 1

66 INDUSTRIAL DRIVE, AUGUSTA, MAINE
MAINE DEPARTMENT OF TRANSPORTATION

PHASING PLAN

SHEET NUMBER
C003

U:\2798_Allied Engineering_MaineDOT Fleet Services\Z - CAD\dwg\2798-PHASING.dwg Feb 04, 2014 - 9:01am



NOTES:

1. PROTECT ALL TEMPORARY BENCHMARKS OR TRANSFER TO ALTERNATE LOCATION OUTSIDE OF WORK ZONE, AS NECESSARY.
2. REFER TO SHEETS C300, C301, C302 FOR PERIMETER EROSION CONTROL THAT MUST BE IN PLACE WHERE DEMOLITION WORK IS ACTIVE.
3. ALL ITEMS NOTED FOR REMOVAL SHALL BE REMOVED AND DISPOSED IN ACCORDANCE WITH STATE AND FEDERAL REGULATIONS, UNLESS OTHERWISE NOTED.
4. ABOVE GROUND FUEL TANK AND ALL ASSOCIATED APPURTENANCES SHALL BE REMOVED AND DISPOSED IN ACCORDANCE WITH STATE OF MAINE OFFICE OF STATE FIRE MARSHALL REQUIREMENTS.
5. RELOCATION OF EXISTING UTILITY POLE NEAR THE MAIN ENTRANCE SHALL BE COORDINATED WITH CENTRAL MAINE POWER COMPANY.
6. REFER TO SHEETS C301 AND C302 FOR GRADING LIMITS AND WETLAND IMPACTS.
7. CLEARING LIMITS SHALL BE REVIEWED WITH OWNER PRIOR TO THE START OF TREE CUTTING. LIMITS SHALL MATCH THE PROPOSED TREE LINE, AS SHOWN ON THE PLANS OR ROUGHLY 5' BEYOND GRADING LIMITS, IF NO PROPOSED TREELINE IS SHOWN.

ISSUED FOR BID
FEBRUARY 5, 2014

Gorrill-Palmer Consulting Engineers, Inc.
PO Box 1237 Engineering Excellence Since 1998 207-657-6910
15 Shaker Road FAX: 207-657-6912
Gray, ME 04039 E-Mail: mailbox@gorrillpalmer.com

Allied Engineering
Structural Mechanical Electrical Commissioning
160 Veranda Street
Portland, Maine 04103
207.221.2260
207.221.2266
www.allied-eng.com

Allied Project No: 13057 Cad File:

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

	DATE
COMMISSIONER:	
CHIEF ENGINEER:	

STATE OF MAINE
WILLIAM C. HASKELL
No. 8518
LICENSED
PROFESSIONAL ENGINEER
1/27/2014

PROJECT INFORMATION		
PROGRAM		SIGNATURE
PROJECT MANAGER	ALLIED ENG., INC.	ARCH. LIN. NUMBER
DESIGNER		
CONSULTANT	GORRILL-PALMER	
PROJECT RESIDENT		DATE FEBRUARY 5, 2014
CONTRACTOR		
PROJECT COMPLETION DATE	-	

PIN NO. 020118.00

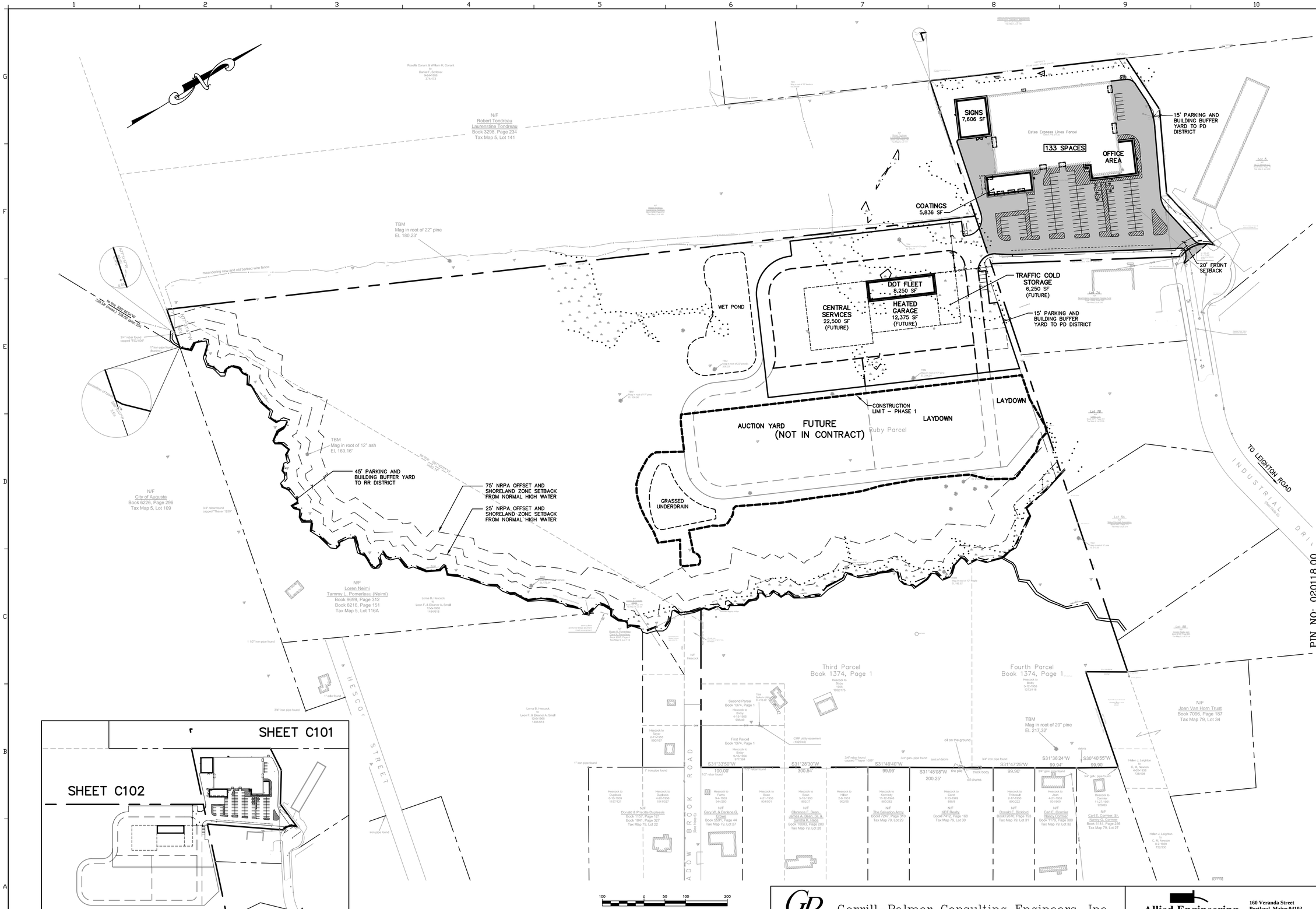
66 INDUSTRIAL DRIVE-PHASE 1

66 INDUSTRIAL DRIVE, AUGUSTA, MAINE
MAINE DEPARTMENT OF TRANSPORTATION

DEMOLITION PLAN

SHEET NUMBER
C004

U:\2798_Allied Engineering_MaineDOT Fleet Services\Z - CAD\dwg\2798-DEM01.dwg Feb 04, 2014 - 9:02am



KEY MAP

ISSUED FOR BID
FEBRUARY 5, 2014

Gorrill–Palmer Consulting Engineers, Inc.
PO Box 1237
15 Shaker Road
Gray, ME 04039
207–657–6910
FAX: 207–657–6912
E–Mail: mailbox@gorrillpalmer.com
Engineering Excellence Since 1998

Allied Engineering
Structural Mechanical Electrical Commissioning
160 Veranda Street
Portland, Maine 04103
207.221.2260
207.221.2266
www.allied-eng.com

Allied Project No: 13057 Cad File:

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

DATE

COMMISSIONER:

CHIEF ENGINEER:

STATE OF MAINE
WILLIAM C. HASKELL
No. 8518
1/27/2014
LICENSED
PROFESSIONAL ENGINEER

INFORMATION	
SIGNATURE	–
ARCH. LIN. NUMBER	
DATE	FEBRUARY 5, 2014

PROJECT	
PROGRAM	
PROJECT MANAGER	
DESIGNER	ALLIED ENG., INC.
CONSULTANT	GORRILL–PALMER
PROJECT RESIDENT	
CONTRACTOR	
PROJECT COMPLETION DATE	–

PIN NO: 020118.00

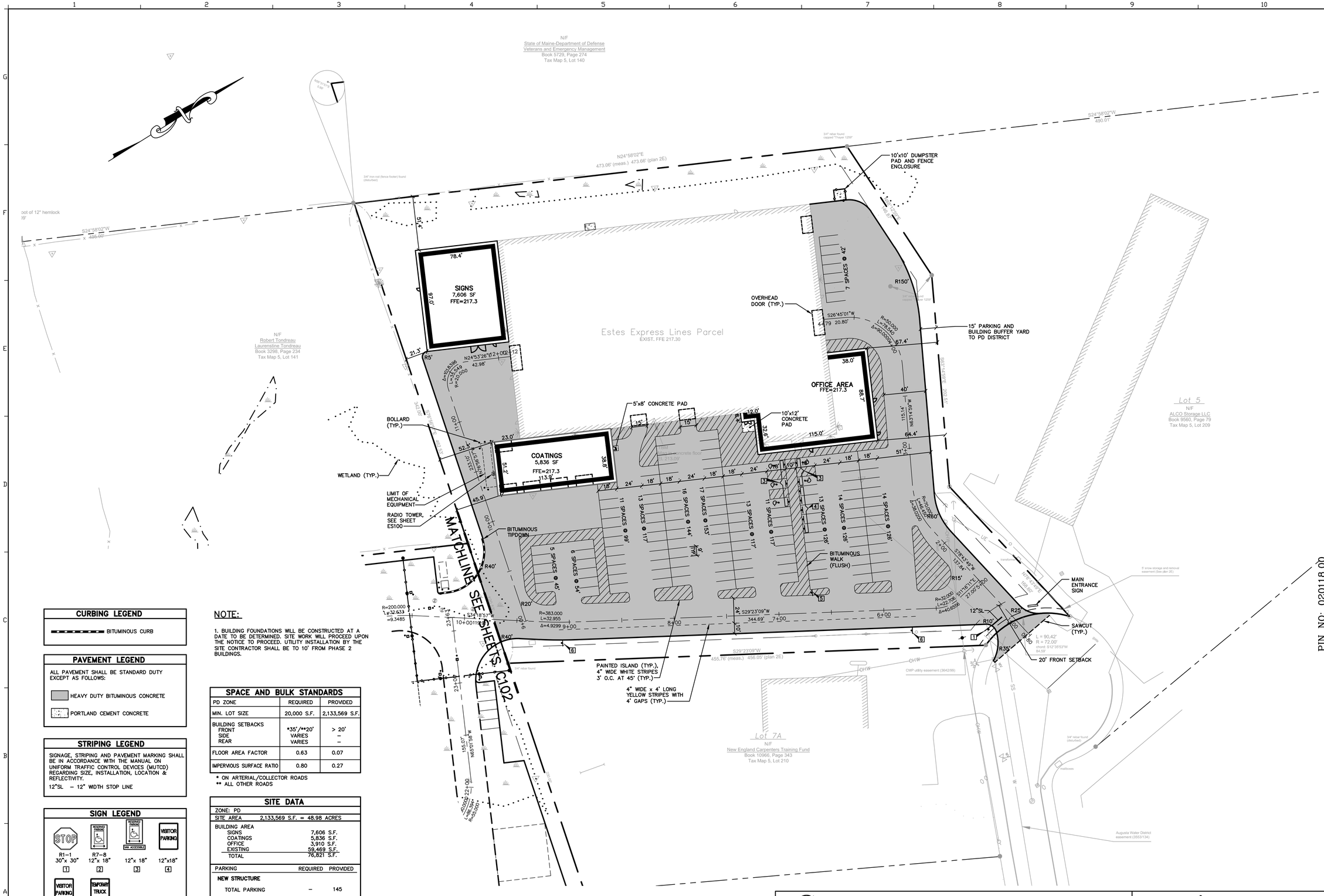
66 INDUSTRIAL DRIVE–PHASE 1

66 INDUSTRIAL DRIVE, AUGUSTA, MAINE
MAINE DEPARTMENT OF TRANSPORTATION

SITE PLAN – OVERALL

SHEET NUMBER
C100

U:\2798_Allied Engineering_MaineDOT Fleet Services\Z – CAD\dwg\2798–SP.dwg Feb 04, 2014 – 9:02am



CURBING LEGEND

BITUMINOUS CURB

PAVEMENT LEGEND

ALL PAVEMENT SHALL BE STANDARD DUTY EXCEPT AS FOLLOWS:

HEAVY DUTY BITUMINOUS CONCRETE

PORTLAND CEMENT CONCRETE

STRIPING LEGEND

SIGNAGE, STRIPING AND PAVEMENT MARKING SHALL BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) REGARDING SIZE, INSTALLATION, LOCATION & REFLECTIVITY.

12"SL – 12" WIDTH STOP LINE

SIGN LEGEND

R1-1	R7-8		
30"x 30"	12"x 18"	12"x 18"	12"x18"
1	2	3	4

12"x18"
5 6

NOTE:

1. BUILDING FOUNDATIONS WILL BE CONSTRUCTED AT A DATE TO BE DETERMINED. SITE WORK WILL PROCEED UPON THE NOTICE TO PROCEED. UTILITY INSTALLATION BY THE SITE CONTRACTOR SHALL BE TO 10' FROM PHASE 2 BUILDINGS.

SPACE AND BULK STANDARDS

PD ZONE	REQUIRED	PROVIDED
MIN. LOT SIZE	20,000 S.F.	2,133,569 S.F.
BUILDING SETBACKS FRONT SIDE REAR	 *35'/**20' VARIES VARIES	 > 20' – –
FLOOR AREA FACTOR	0.63	0.07
IMPERVIOUS SURFACE RATIO	0.80	0.27

* ON ARTERIAL/COLLECTOR ROADS
** ALL OTHER ROADS

SITE DATA

ZONE: PD
SITE AREA 2,133,569 S.F. = 48.98 ACRES

BUILDING AREA	
SIGNS	7,606 S.F.
COATINGS	5,836 S.F.
OFFICE	3,910 S.F.
EXISTING	59,469 S.F.
TOTAL	76,821 S.F.

PARKING	REQUIRED	PROVIDED
NEW STRUCTURE		
TOTAL PARKING	–	145
HANDICAPPED SPACES	5	5

ISSUED FOR BID
FEBRUARY 5, 2014

Gorrill–Palmer Consulting Engineers, Inc.
Engineering Excellence Since 1998
PO Box 1237
15 Shaker Road
Gray, ME 04039
207–657–6910
FAX: 207–657–6912
E–Mail: mailbox@gorrillpalmer.com

Allied Engineering
Structural Mechanical Electrical Commissioning
160 Veranda Street
Portland, Maine 04103
207.221.2260
207.221.2266
www.allied-eng.com

Allied Project No: 13057 Cad File:

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

	DATE
COMMISSIONER:	
CHIEF ENGINEER:	

STATE OF MAINE
WILLIAM C. HASKELL
No. 8518
LICENSED
PROFESSIONAL ENGINEER
1/27/2014

	SIGNATURE
–	
ARCH. LIN. NUMBER	
DATE	FEBRUARY 5, 2014

PROJECT INFORMATION	
PROGRAM	
PROJECT MANAGER	
DESIGNER	ALLIED ENG., INC.
CONSULTANT	GORRILL–PALMER
PROJECT RESIDENT	
CONTRACTOR	
PROJECT COMPLETION DATE	–

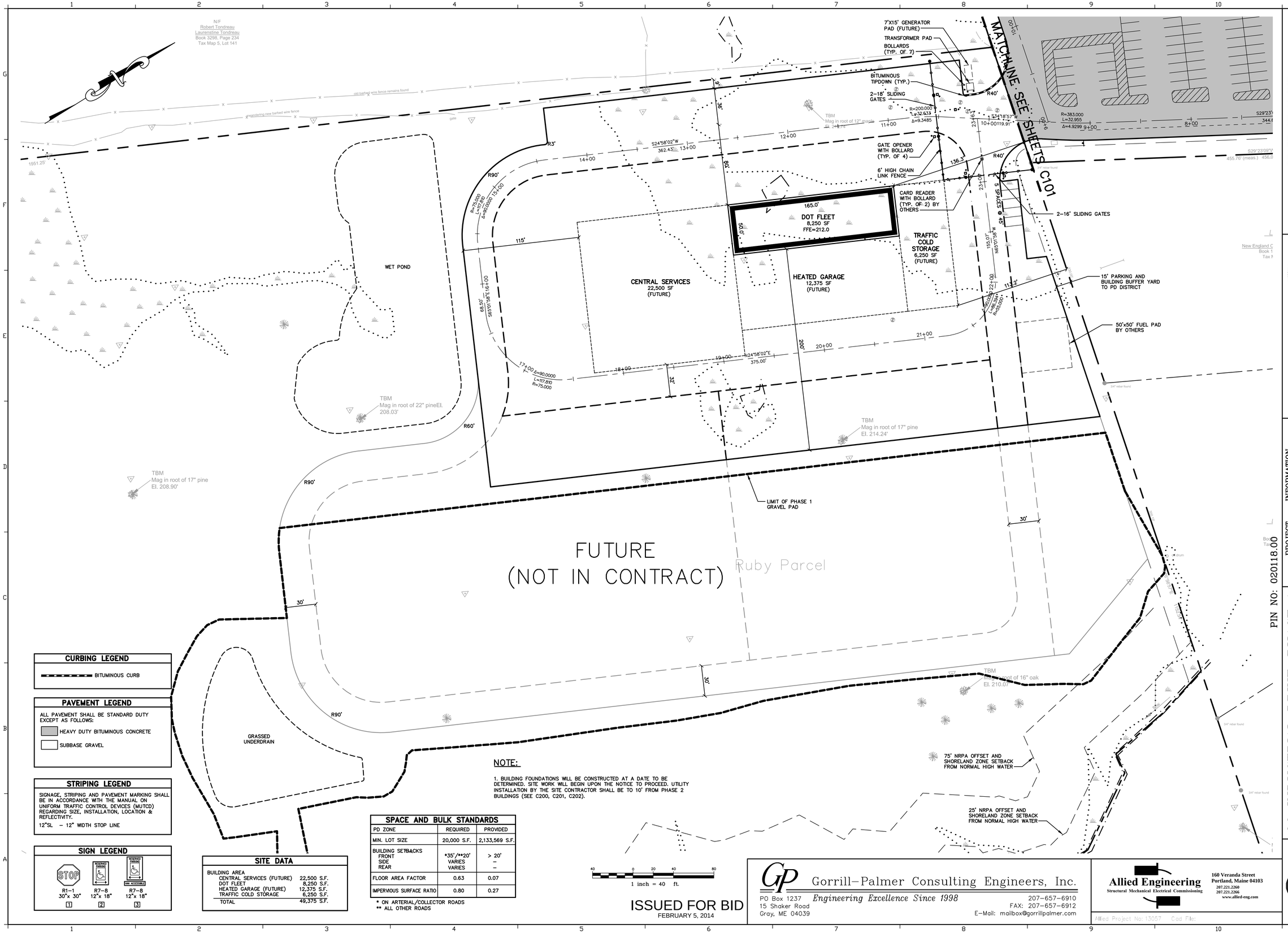
PIN NO: 020118.00

66 INDUSTRIAL DRIVE–PHASE 1
66 INDUSTRIAL DRIVE, AUGUSTA, MAINE
MAINE DEPARTMENT OF TRANSPORTATION

SITE PLAN – NORTH

SHEET NUMBER
C101

U:\2798_Allied Engineering_MaineDOT Fleet Services\Z – CAD\dwg\2798-SP.dwg Feb 04, 2014 - 9:02am



CURBING LEGEND

BITUMINOUS CURB

PAVEMENT LEGEND

ALL PAVEMENT SHALL BE STANDARD DUTY EXCEPT AS FOLLOWS:

- HEAVY DUTY BITUMINOUS CONCRETE
- SUBBASE GRAVEL

STRIPING LEGEND

SIGNAGE, STRIPING AND PAVEMENT MARKING SHALL BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) REGARDING SIZE, INSTALLATION, LOCATION & REFLECTIVITY.

12"SL – 12" WIDTH STOP LINE

SIGN LEGEND

R1-1	R7-8	R7-8
30"x 30"	12"x 18"	12"x 18"
1	2	3

SITE DATA

BUILDING AREA	
CENTRAL SERVICES (FUTURE)	22,500 S.F.
DOT FLEET	8,250 S.F.
HEATED GARAGE (FUTURE)	12,375 S.F.
TRAFFIC COLD STORAGE	6,250 S.F.
TOTAL	49,375 S.F.

SPACE AND BULK STANDARDS

PD ZONE	REQUIRED	PROVIDED
MIN. LOT SIZE	20,000 S.F.	2,133,569 S.F.
BUILDING SETBACKS FRONT	*35'/**20'	> 20'
SIDE	VARIES	–
REAR	VARIES	–
FLOOR AREA FACTOR	0.63	0.07
IMPERVIOUS SURFACE RATIO	0.80	0.27

* ON ARTERIAL/COLLECTOR ROADS
** ALL OTHER ROADS

NOTE:

1. BUILDING FOUNDATIONS WILL BE CONSTRUCTED AT A DATE TO BE DETERMINED. SITE WORK WILL BEGIN UPON THE NOTICE TO PROCEED. UTILITY INSTALLATION BY THE SITE CONTRACTOR SHALL BE TO 10' FROM PHASE 2 BUILDINGS (SEE C200, C201, C202).

ISSUED FOR BID
FEBRUARY 5, 2014

Gorrill–Palmer Consulting Engineers, Inc.
PO Box 1237
15 Shaker Road
Gray, ME 04039
Engineering Excellence Since 1998
207–657–6910
FAX: 207–657–6912
E–Mail: mailbox@gorrillpalmer.com

Allied Engineering
Structural Mechanical Electrical Commissioning
160 Veranda Street
Portland, Maine 04103
207.221.2260
207.221.2266
www.allied-eng.com

Allied Project No: 13057 Cad File:

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

DATE
COMMISSIONER:
CHIEF ENGINEER:

STATE OF MAINE
WILLIAM C. HASKELL
No. 8518
LICENSED
PROFESSIONAL ENGINEER
1/27/2014

INFORMATION	SIGNATURE
PROJECT PROGRAM	–
PROJECT MANAGER	ALLIED ENG., INC.
DESIGNER	GORRILL–PALMER
CONSULTANT	
PROJECT RESIDENT	
CONTRACTOR	
PROJECT COMPLETION DATE	–

ARCH. LIN. NUMBER
DATE FEBRUARY 5, 2014

PIN NO: 020118.00

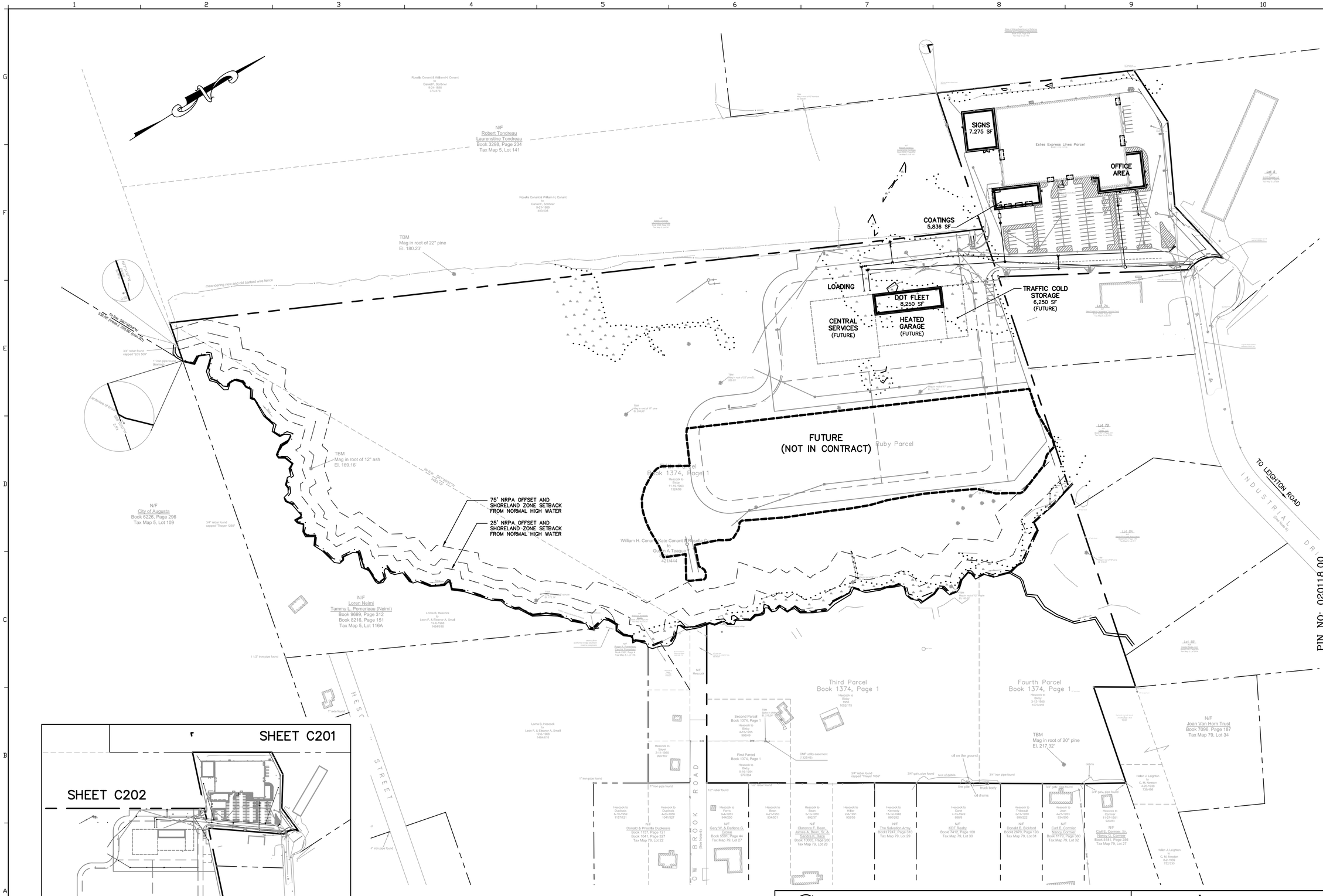
66 INDUSTRIAL DRIVE–PHASE 1

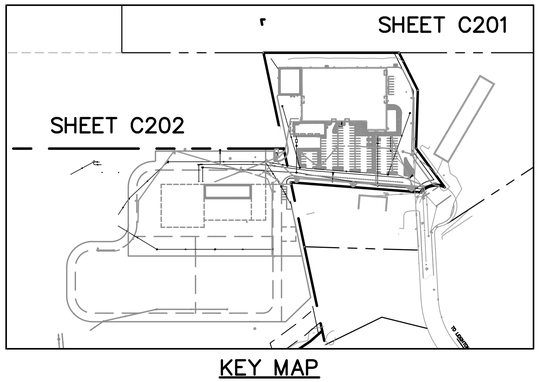
66 INDUSTRIAL DRIVE, AUGUSTA, MAINE
MAINE DEPARTMENT OF TRANSPORTATION

SITE PLAN – SOUTH

SHEET NUMBER
C102

U:\2798_Allied Engineering_MaineDOT Fleet Services\Z - CAD\dwg\2798-SP.dwg Feb 04, 2014 - 9:02am





KEY MAP

ISSUED FOR BID
FEBRUARY 5, 2014

Gorrill–Palmer Consulting Engineers, Inc.
PO Box 1237
15 Shaker Road
Gray, ME 04039
Engineering Excellence Since 1998
207–657–6910
FAX: 207–657–6912
E–Mail: mailbox@gorrillpalmer.com

Allied Engineering
Structural Mechanical Electrical Commissioning
160 Veranda Street
Portland, Maine 04103
207.221.2260
207.221.2266
www.allied-eng.com

Allied Project No: 13057 Cad File:

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

	DATE
COMMISSIONER:	
CHIEF ENGINEER:	

STATE OF MAINE
WILLIAM C. HASKELL
No. 8518
LICENSED
PROFESSIONAL ENGINEER
1/27/2014

PROJECT INFORMATION		SIGNATURE
PROGRAM		–
PROJECT MANAGER		ARCH. LIN. NUMBER
DESIGNER	ALLIED ENG., INC.	
CONSULTANT	GORRILL–PALMER	
PROJECT RESIDENT		DATE FEBRUARY 5, 2014
CONTRACTOR		
PROJECT COMPLETION DATE	–	

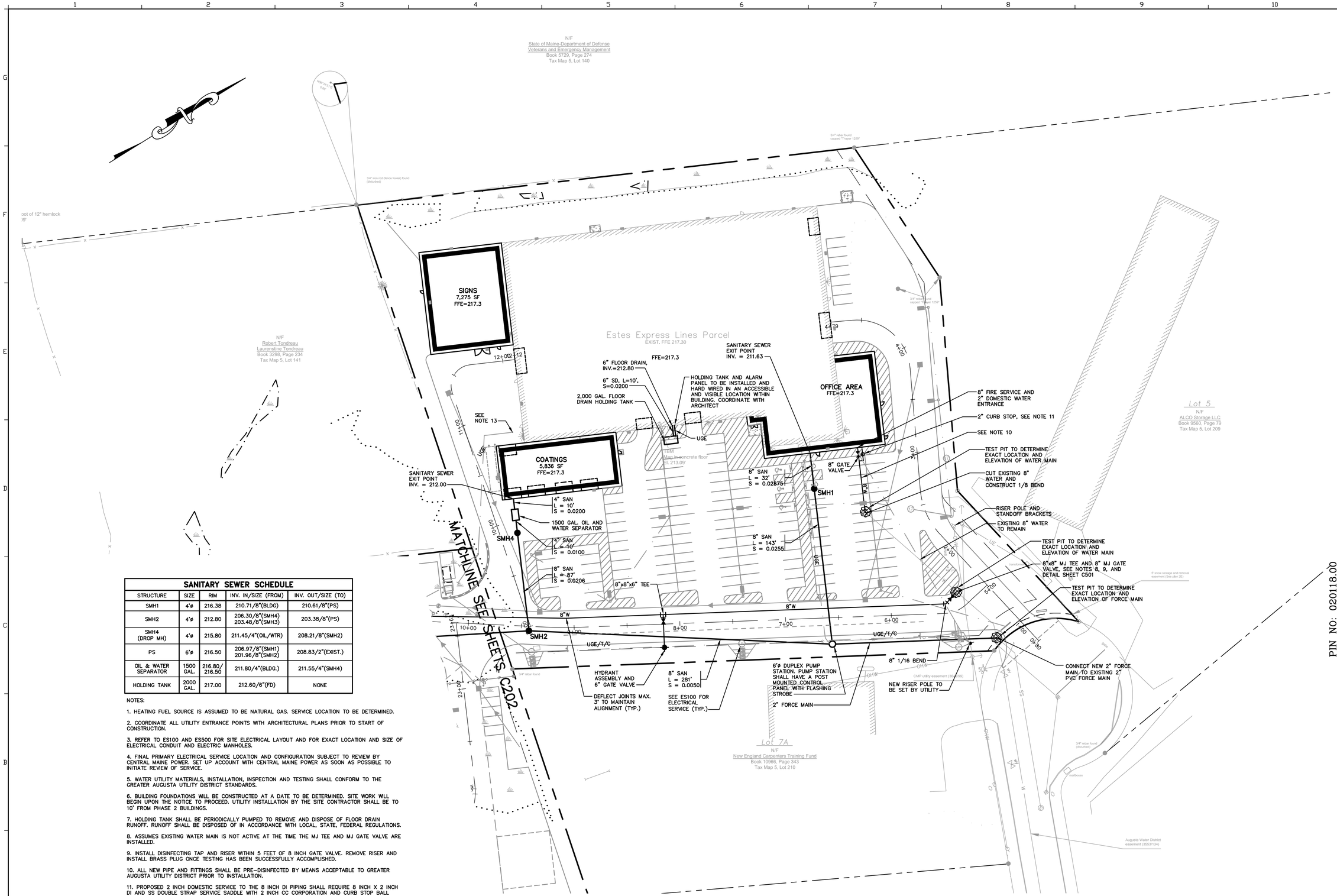
PIN NO: 020118.00

66 INDUSTRIAL DRIVE–PHASE 1
66 INDUSTRIAL DRIVE, AUGUSTA, MAINE
MAINE DEPARTMENT OF TRANSPORTATION

UTILITY PLAN – OVERALL

SHEET NUMBER
C200

U:\2798_Allied Engineering_MaineDOT Fleet Services\Z - CAD\dwg\2798-UTIL.dwg Feb 04, 2014 - 9:02am



SANITARY SEWER SCHEDULE

STRUCTURE	SIZE	RIM	INV. IN/SIZE (FROM)	INV. OUT/SIZE (TO)
SMH1	4'ø	216.38	210.71/8"(BLDG)	210.61/8"(PS)
SMH2	4'ø	212.80	206.30/8"(SMH4) 203.48/8"(SMH3)	203.38/8"(PS)
SMH4 (DROP MH)	4'ø	215.80	211.45/4"(OIL/WTR)	208.21/8"(SMH2)
PS	6'ø	216.50	206.97/8"(SMH1) 201.96/8"(SMH2)	208.83/2"(EXIST.)
OIL & WATER SEPARATOR	1500 GAL.	216.80/ 216.50	211.80/4"(BLDG.)	211.55/4"(SMH4)
HOLDING TANK	2000 GAL.	217.00	212.60/6"(FD)	NONE

NOTES:

1. HEATING FUEL SOURCE IS ASSUMED TO BE NATURAL GAS. SERVICE LOCATION TO BE DETERMINED.

2. COORDINATE ALL UTILITY ENTRANCE POINTS WITH ARCHITECTURAL PLANS PRIOR TO START OF CONSTRUCTION.

3. REFER TO ES100 AND ES500 FOR SITE ELECTRICAL LAYOUT AND FOR EXACT LOCATION AND SIZE OF ELECTRICAL CONDUIT AND ELECTRIC MANHOLES.

4. FINAL PRIMARY ELECTRICAL SERVICE LOCATION AND CONFIGURATION SUBJECT TO REVIEW BY CENTRAL MAINE POWER. SET UP ACCOUNT WITH CENTRAL MAINE POWER AS SOON AS POSSIBLE TO INITIATE REVIEW OF SERVICE.

5. WATER UTILITY MATERIALS, INSTALLATION, INSPECTION AND TESTING SHALL CONFORM TO THE GREATER AUGUSTA UTILITY DISTRICT STANDARDS.

6. BUILDING FOUNDATIONS WILL BE CONSTRUCTED AT A DATE TO BE DETERMINED. SITE WORK WILL BEGIN UPON THE NOTICE TO PROCEED. UTILITY INSTALLATION BY THE SITE CONTRACTOR SHALL BE TO 10' FROM PHASE 2 BUILDINGS.

7. HOLDING TANK SHALL BE PERIODICALLY PUMPED TO REMOVE AND DISPOSE OF FLOOR DRAIN RUNOFF. RUNOFF SHALL BE DISPOSED OF IN ACCORDANCE WITH LOCAL, STATE, FEDERAL REGULATIONS.

8. ASSUMES EXISTING WATER MAIN IS NOT ACTIVE AT THE TIME THE MJ TEE AND MJ GATE VALVE ARE INSTALLED.

9. INSTALL DISINFECTING TAP AND RISER WITHIN 5 FEET OF 8 INCH GATE VALVE. REMOVE RISER AND INSTALL BRASS PLUG ONCE TESTING HAS BEEN SUCCESSFULLY ACCOMPLISHED.

10. ALL NEW PIPE AND FITTINGS SHALL BE PRE-DISINFECTED BY MEANS ACCEPTABLE TO GREATER AUGUSTA UTILITY DISTRICT PRIOR TO INSTALLATION.

11. PROPOSED 2 INCH DOMESTIC SERVICE TO THE 8 INCH DI PIPING SHALL REQUIRE 8 INCH X 2 INCH DI AND SS DOUBLE STRAP SERVICE SADDLE WITH 2 INCH CC CORPORATION AND CURB STOP BALL VALVE. BALL VALVE MUST BE SUPPLIED WITH A FOOT PIECE TO ACCEPT A STANDARD VALVE BOX.

12. ALL GATE VALVE AND SERVICE BOXES ON THE PROPERTY WILL BE PRIVATE AND THE RESPONSIBILITY OF THE OWNER TO MAINTAIN IN GOOD WORKING CONDITION. DISTRICT MAY OPERATE ON-SITE VALVES IF NECESSARY TO ISOLATE A PARTICULAR BUILDING OR HYDRANT TO KEEP FROM SHUTTING DOWN THE ENTIRE FACILITY BUT ACCEPTS NO RESPONSIBILITY FOR THEIR OPERATION.

13. VERIFY UGE/T/C LOCATION OF ENTRANCE INTO THE MAIN BUILDING WITH OWNER/ELECTRICAL ENGINEER.

ISSUED FOR BID
FEBRUARY 5, 2014

Gorrill-Palmer Consulting Engineers, Inc.
Engineering Excellence Since 1998
PO Box 1237
15 Shaker Road
Gray, ME 04039
207-657-6910
FAX: 207-657-6912
E-Mail: mailbox@gorrillpalmer.com

Allied Engineering
Structural Mechanical Electrical Commissioning
160 Veranda Street
Portland, Maine 04103
207.221.2260
207.221.2266
www.allied-eng.com

Allied Project No: 13057 Cad File:

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

COMMISSIONER: DATE
CHIEF ENGINEER:

STATE OF MAINE
WILLIAM C. HASKELL
No. 8518
LICENSED
PROFESSIONAL ENGINEER
1/27/2014

PROJECT INFORMATION		SIGNATURE
PROGRAM		–
PROJECT MANAGER	ALLIED ENG., INC.	ARCH. LIN. NUMBER
DESIGNER	GORRILL-PALMER	DATE FEBRUARY 5, 2014
CONSULTANT		
PROJECT RESIDENT		
CONTRACTOR		
PROJECT COMPLETION DATE		–

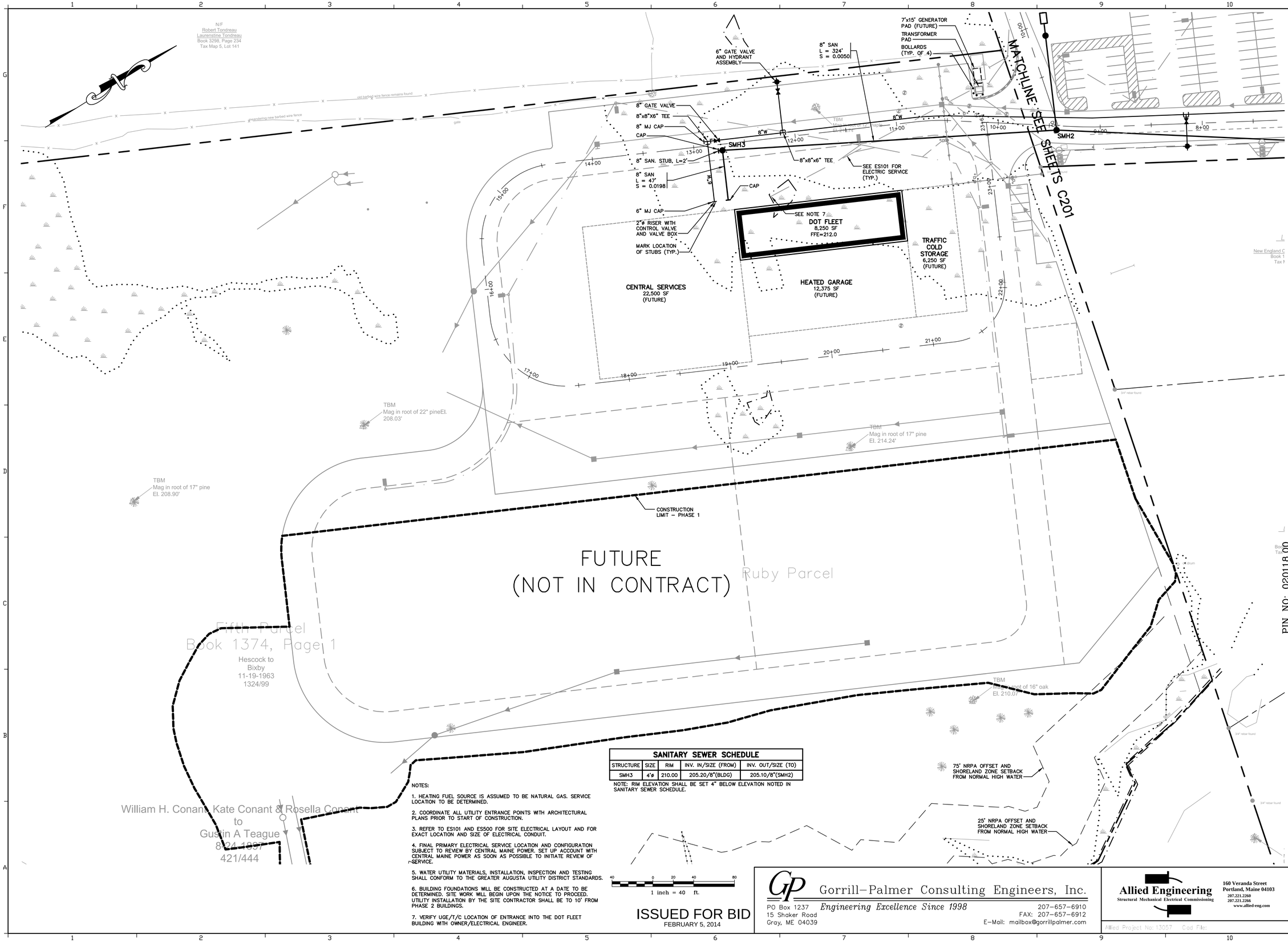
PIN NO: 020118.00

66 INDUSTRIAL DRIVE-PHASE 1
66 INDUSTRIAL DRIVE, AUGUSTA, MAINE
MAINE DEPARTMENT OF TRANSPORTATION

UTILITY PLAN – NORTH

SHEET NUMBER
C201

U:\2798_Allied Engineering_MaineDOT Fleet Services\Z - CAD\dwg\2798-UTIL.dwg Feb 04, 2014 - 9:02am



SANITARY SEWER SCHEDULE				
STRUCTURE	SIZE	RIM	INV. IN/SIZE (FROM)	INV. OUT/SIZE (TO)
SMH3	4'ø	210.00	205.20/8"(BLDG)	205.10/8"(SMH2)

NOTE: RIM ELEVATION SHALL BE SET 4" BELOW ELEVATION NOTED IN SANITARY SEWER SCHEDULE.

NOTES:

1. HEATING FUEL SOURCE IS ASSUMED TO BE NATURAL GAS. SERVICE LOCATION TO BE DETERMINED.

2. COORDINATE ALL UTILITY ENTRANCE POINTS WITH ARCHITECTURAL PLANS PRIOR TO START OF CONSTRUCTION.

3. REFER TO ES101 AND ES500 FOR SITE ELECTRICAL LAYOUT AND FOR EXACT LOCATION AND SIZE OF ELECTRICAL CONDUIT.

4. FINAL PRIMARY ELECTRICAL SERVICE LOCATION AND CONFIGURATION SUBJECT TO REVIEW BY CENTRAL MAINE POWER. SET UP ACCOUNT WITH CENTRAL MAINE POWER AS SOON AS POSSIBLE TO INITIATE REVIEW OF SERVICE.

5. WATER UTILITY MATERIALS, INSTALLATION, INSPECTION AND TESTING SHALL CONFORM TO THE GREATER AUGUSTA UTILITY DISTRICT STANDARDS.

6. BUILDING FOUNDATIONS WILL BE CONSTRUCTED AT A DATE TO BE DETERMINED. SITE WORK WILL BEGIN UPON THE NOTICE TO PROCEED. UTILITY INSTALLATION BY THE SITE CONTRACTOR SHALL BE TO 10' FROM PHASE 2 BUILDINGS.

7. VERIFY UGE/T/C LOCATION OF ENTRANCE INTO THE DOT FLEET BUILDING WITH OWNER/ELECTRICAL ENGINEER.

ISSUED FOR BID
FEBRUARY 5, 2014

Gorrill–Palmer Consulting Engineers, Inc.
PO Box 1237
15 Shaker Road
Gray, ME 04039
Engineering Excellence Since 1998
207–657–6910
FAX: 207–657–6912
E–Mail: mailbox@gorrillpalmer.com

Allied Engineering
Structural Mechanical Electrical Commissioning
160 Veranda Street
Portland, Maine 04103
207.221.2260
207.221.2266
www.allied-eng.com

Allied Project No: 13057 Cad File:

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

DATE

COMMISSIONER:

CHIEF ENGINEER:

STATE OF MAINE
WILLIAM C. HASKELL
No. 8518
LICENSED
PROFESSIONAL ENGINEER
12/7/2013

INFORMATION	
SIGNATURE	–
ARCH. LIN. NUMBER	
DATE	FEBRUARY 5, 2014

PROJECT	INFORMATION
PROGRAM	
PROJECT MANAGER	
DESIGNER	ALLIED ENG., INC.
CONSULTANT	GORRILL–PALMER
PROJECT RESIDENT	
CONTRACTOR	
PROJECT COMPLETION DATE	–

PIN NO: 020118.00

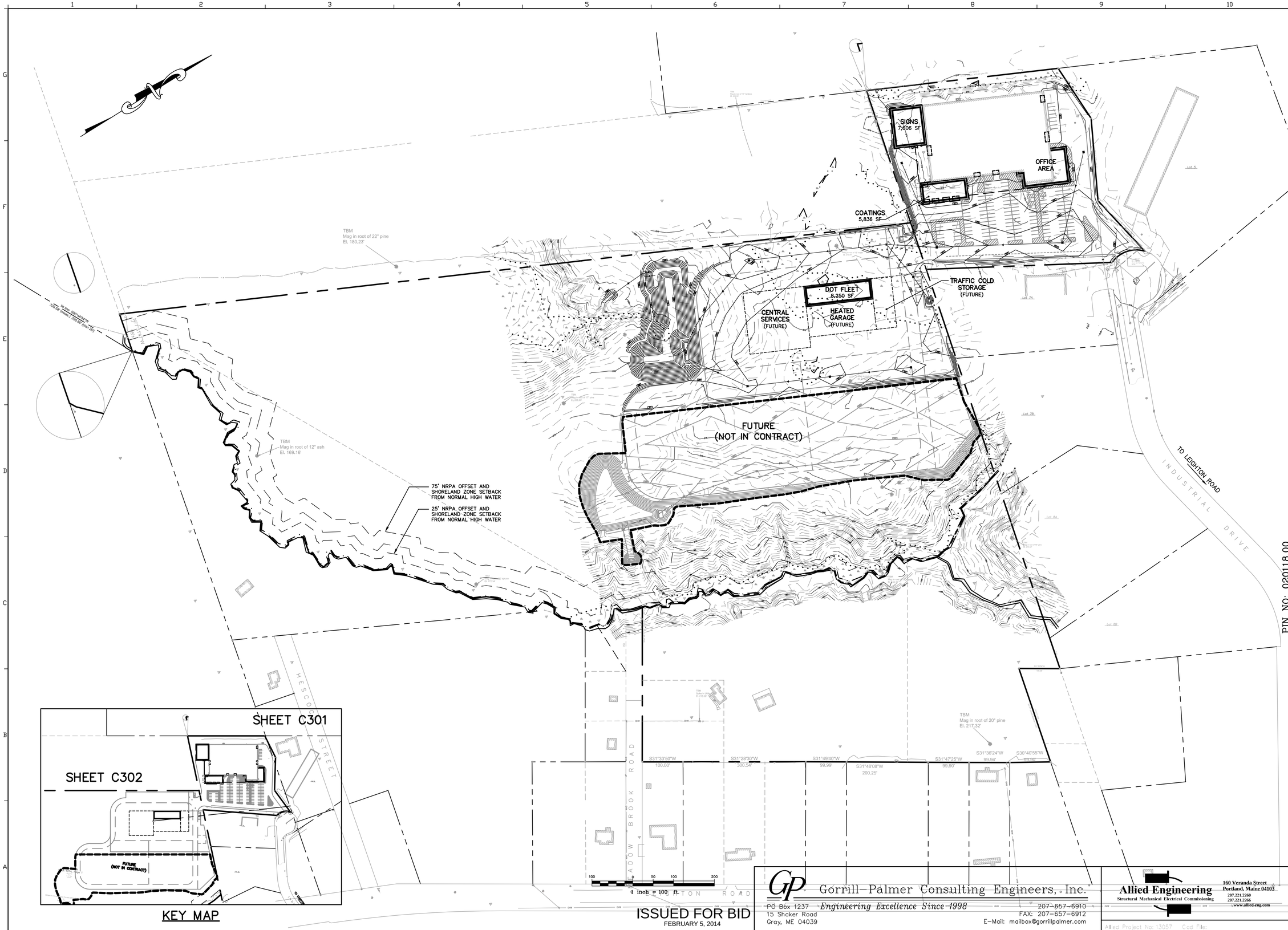
66 INDUSTRIAL DRIVE–PHASE 1

66 INDUSTRIAL DRIVE, AUGUSTA, MAINE
MAINE DEPARTMENT OF TRANSPORTATION

UTILITY PLAN – SOUTH

SHEET NUMBER
C202

U:\2798_Allied Engineering_MaineDOT Fleet Services\Z - CAD\dwg\2798-UTIL.dwg Feb 04, 2014 - 9:02am



ISSUED FOR BID
FEBRUARY 5, 2014

Gorrill-Palmer Consulting Engineers, Inc.
PO Box 1237
15 Shaker Road
Gray, ME 04039
Engineering Excellence Since 1998
207-657-6910
FAX: 207-657-6912
E-Mail: mailbox@gorrillpalmer.com

Allied Engineering
Structural Mechanical Electrical Commissioning
160 Veranda Street
Portland, Maine 04103
207.221.2260
207.221.2266
www.allied-eng.com

Allied Project No: 13057 Cad File:

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

	DATE
COMMISSIONER:	
CHIEF ENGINEER:	

STATE OF MAINE
WILLIAM C. HASKELL
No. 8518
LICENSED
PROFESSIONAL ENGINEER
1/27/2014

PROJECT INFORMATION	
PROGRAM	
PROJECT MANAGER	SIGNATURE
DESIGNER	ALLIED ENG., INC.
CONSULTANT	GORRILL-PALMER
PROJECT RESIDENT	ARCH. LIN. NUMBER
CONTRACTOR	
PROJECT COMPLETION DATE	-

PIN NO: 020118.00

66 INDUSTRIAL DRIVE-PHASE 1

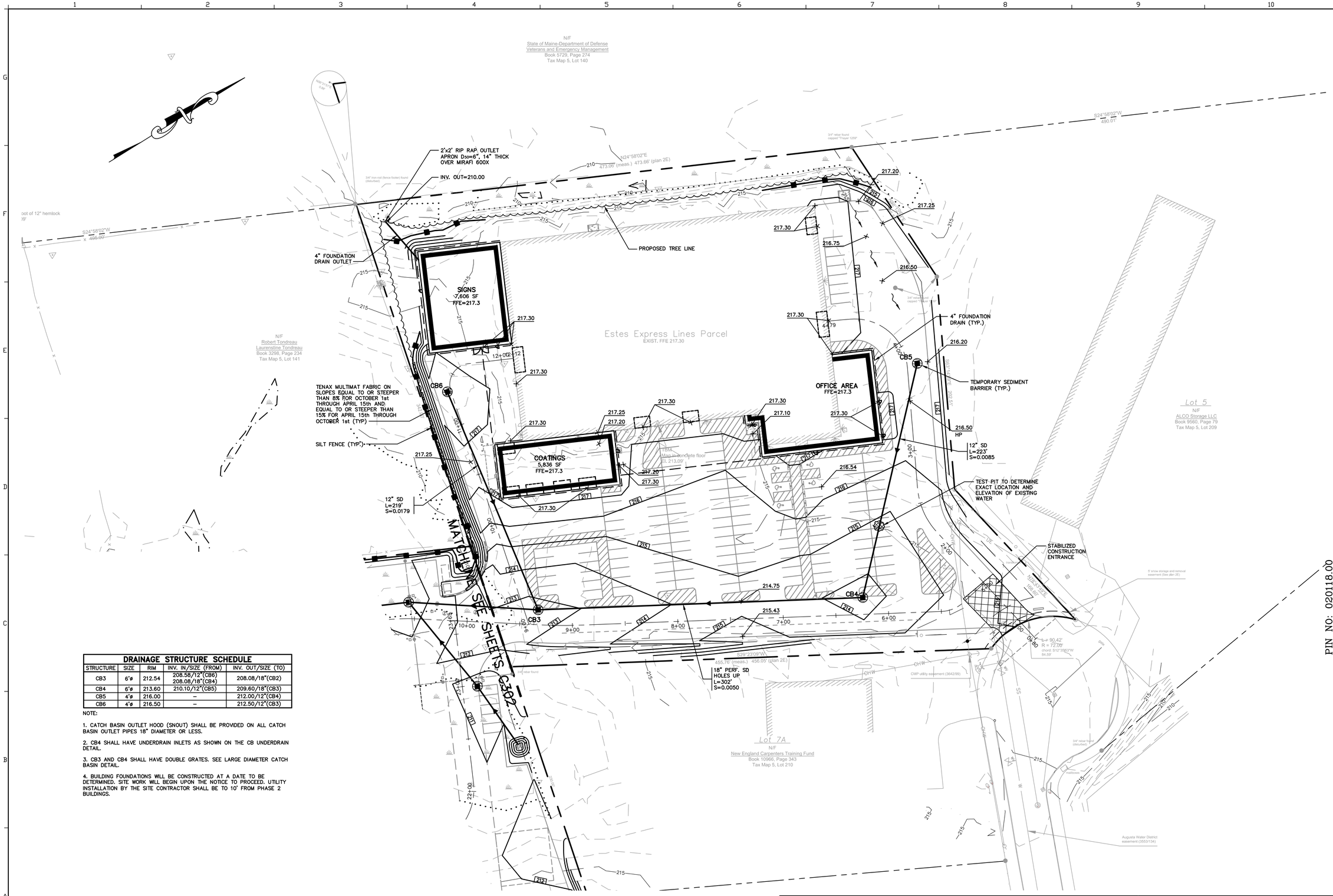
66 INDUSTRIAL DRIVE, AUGUSTA, MAINE
MAINE DEPARTMENT OF TRANSPORTATION

GRADING & DRAINAGE PLAN OVERALL

DATE FEBRUARY 5, 2014

SHEET NUMBER
C300

U:\2798_Allied Engineering_MaineDOT Fleet Services\Z - CAD\dwg\2798-GRADE.dwg Feb 04, 2014 - 9:02am



DRAINAGE STRUCTURE SCHEDULE				
STRUCTURE	SIZE	RIM	INV. IN/SIZE (FROM)	INV. OUT/SIZE (TO)
CB3	6'ø	212.54	208.58/12"(CB6) 208.08/18"(CB4)	208.08/18"(CB2)
CB4	6'ø	213.60	210.10/12"(CB5)	209.60/18"(CB3)
CB5	4'ø	216.00	–	212.00/12"(CB4)
CB6	4'ø	216.50	–	212.50/12"(CB3)

NOTE:

1. CATCH BASIN OUTLET HOOD (SNOUT) SHALL BE PROVIDED ON ALL CATCH BASIN OUTLET PIPES 18" DIAMETER OR LESS.

2. CB4 SHALL HAVE UNDERDRAIN INLETS AS SHOWN ON THE CB UNDERDRAIN DETAIL.

3. CB3 AND CB4 SHALL HAVE DOUBLE GRATES. SEE LARGE DIAMETER CATCH BASIN DETAIL.

4. BUILDING FOUNDATIONS WILL BE CONSTRUCTED AT A DATE TO BE DETERMINED. SITE WORK WILL BEGIN UPON THE NOTICE TO PROCEED. UTILITY INSTALLATION BY THE SITE CONTRACTOR SHALL BE TO 10' FROM PHASE 2 BUILDINGS.

ISSUED FOR BID
FEBRUARY 5, 2014

Gorrill–Palmer Consulting Engineers, Inc.
PO Box 1237 15 Shaker Road Gray, ME 04039
Engineering Excellence Since 1998
207–657–6910 FAX: 207–657–6912
E–Mail: mailbox@gorrillpalmer.com

Allied Engineering
Structural Mechanical Electrical Commissioning
160 Veranda Street
Portland, Maine 04103
207.221.2260
207.221.2266
www.allied-eng.com
Allied Project No: 13057 Cad File:

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

DATE
COMMISSIONER:
CHIEF ENGINEER:

STATE OF MAINE
WILLIAM C. HASKELL
No. 8518
LICENSED
PROFESSIONAL ENGINEER
1/27/2014

INFORMATION	
PROJECT PROGRAM	SIGNATURE –
PROJECT MANAGER	ALLIED ENG., INC.
DESIGNER	ARCH. LIN. NUMBER
CONSULTANT	GORRILL–PALMER
PROJECT RESIDENT	
CONTRACTOR	DATE FEBRUARY 5, 2014
PROJECT COMPLETION DATE	–

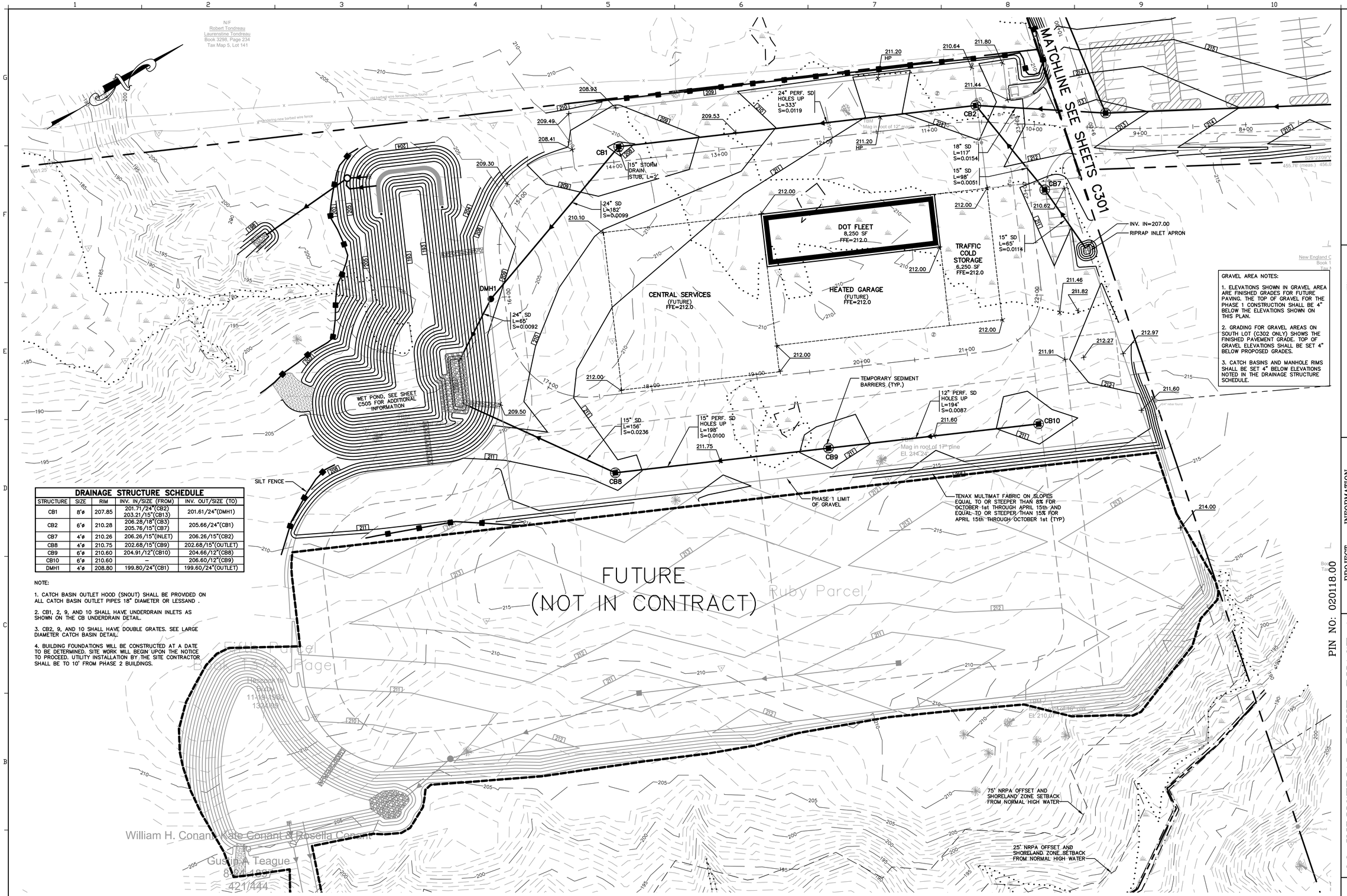
PIN NO: 020118.00

66 INDUSTRIAL DRIVE–PHASE 1
66 INDUSTRIAL DRIVE, AUGUSTA, MAINE
MAINE DEPARTMENT OF TRANSPORTATION

GRADING & DRAINAGE PLAN NORTH

SHEET NUMBER
C301

U:\2798_Allied Engineering_MaineDOT Fleet Services\Z - CAD\dwg\2798-GRADE.dwg Feb 04, 2014 - 9:02am



DRAINAGE STRUCTURE SCHEDULE

STRUCTURE	SIZE	RIM	INV. IN/SIZE (FROM)	INV. OUT/SIZE (TO)
CB1	8'ø	207.85	201.71/24"(CB2) 203.21/15"(CB13)	201.61/24"(DMH1)
CB2	6'ø	210.28	206.28/18"(CB3) 205.76/15"(CB7)	205.66/24"(CB1)
CB7	4'ø	210.26	206.26/15"(INLET)	206.26/15"(CB2)
CB8	4'ø	210.75	202.68/15"(CB9)	202.68/15"(OUTLET)
CB9	6'ø	210.60	204.91/12"(CB10)	204.66/12"(CB8)
CB10	6'ø	210.60	–	206.60/12"(CB9)
DMH1	4'ø	208.80	199.80/24"(CB1)	199.60/24"(OUTLET)

NOTE:

1. CATCH BASIN OUTLET HOOD (SNOUT) SHALL BE PROVIDED ON ALL CATCH BASIN OUTLET PIPES 18" DIAMETER OR LESSAND .

2. CB1, 2, 9, AND 10 SHALL HAVE UNDERDRAIN INLETS AS SHOWN ON THE CB UNDERDRAIN DETAIL.

3. CB2, 9, AND 10 SHALL HAVE DOUBLE GRATES. SEE LARGE DIAMETER CATCH BASIN DETAIL.

4. BUILDING FOUNDATIONS WILL BE CONSTRUCTED AT A DATE TO BE DETERMINED. SITE WORK WILL BEGIN UPON THE NOTICE TO PROCEED. UTILITY INSTALLATION BY THE SITE CONTRACTOR SHALL BE TO 10' FROM PHASE 2 BUILDINGS.

GRAVEL AREA NOTES:

1. ELEVATIONS SHOWN IN GRAVEL AREA ARE FINISHED GRADES FOR FUTURE PAVING. THE TOP OF GRAVEL FOR THE PHASE 1 CONSTRUCTION SHALL BE 4" BELOW THE ELEVATIONS SHOWN ON THIS PLAN.

2. GRADING FOR GRAVEL AREAS ON SOUTH LOT (C302 ONLY) SHOWS THE FINISHED PAVEMENT GRADE. TOP OF GRAVEL ELEVATIONS SHALL BE SET 4" BELOW PROPOSED GRADES.

3. CATCH BASINS AND MANHOLE RIMS SHALL BE SET 4" BELOW ELEVATIONS NOTED IN THE DRAINAGE STRUCTURE SCHEDULE.

ISSUED FOR BID
FEBRUARY 5, 2014

Gorrill–Palmer Consulting Engineers, Inc.
Engineering Excellence Since 1998
PO Box 1237
15 Shaker Road
Gray, ME 04039
207–657–6910
FAX: 207–657–6912
E–Mail: mailbox@gorrillpalmer.com

Allied Engineering
Structural Mechanical Electrical Commissioning
160 Veranda Street
Portland, Maine 04103
207.221.2260
207.221.2266
www.allied-eng.com
Allied Project No: 13057 Cad File:

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

DATE
COMMISSIONER:
CHIEF ENGINEER:

STATE OF MAINE
WILLIAM C. HASKELL
No. 8518
LICENSED
PROFESSIONAL ENGINEER
1/27/2014

PROJECT INFORMATION	
PROGRAM	
PROJECT MANAGER	SIGNATURE
DESIGNER	ALLIED ENG., INC.
CONSULTANT	GORRILL–PALMER
PROJECT RESIDENT	ARCH. LIN. NUMBER
CONTRACTOR	
PROJECT COMPLETION DATE	DATE FEBRUARY 5, 2014

PIN NO: 020118.00

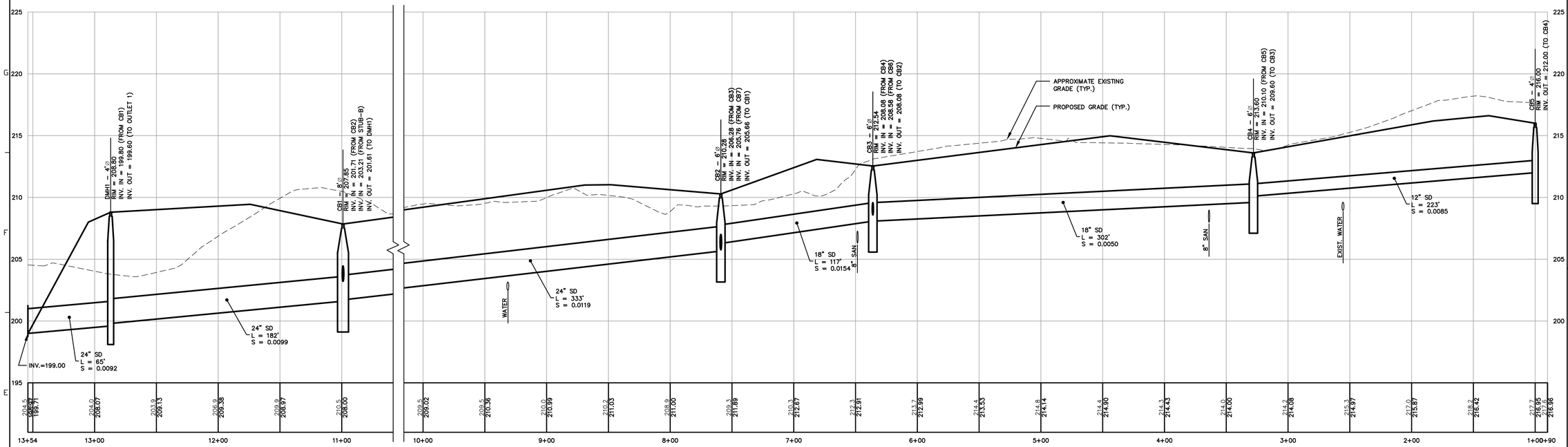
66 INDUSTRIAL DRIVE–PHASE 1

66 INDUSTRIAL DRIVE, AUGUSTA, MAINE
MAINE DEPARTMENT OF TRANSPORTATION

GRADING & DRAINAGE PLAN SOUTH

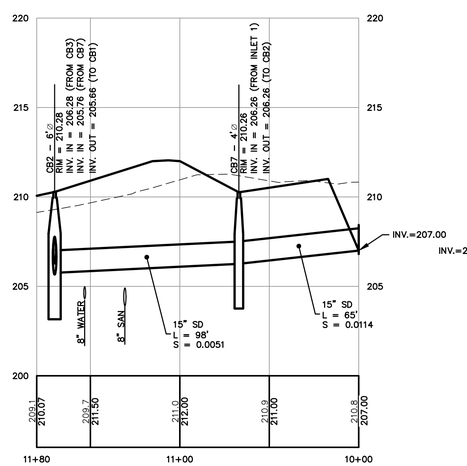
SHEET NUMBER
C302

U:\2798_Allied Engineering_MaineDOT Fleet Services\Z - CAD\dwg\2798-GRADE.dwg Feb 04, 2014 - 9:03am



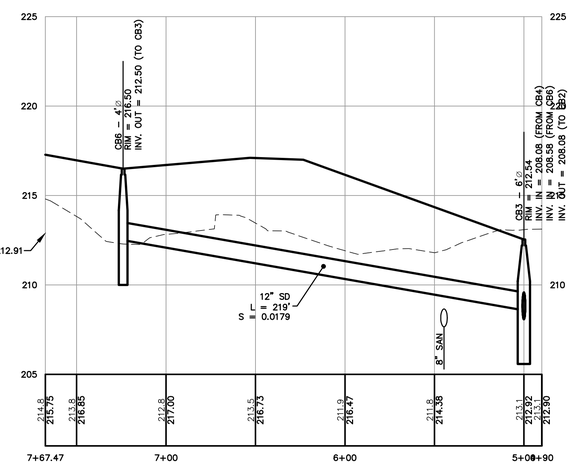
PROFILE 'A'

1"=40' HORIZ.
1"=4' VERT.



PROFILE 'C'

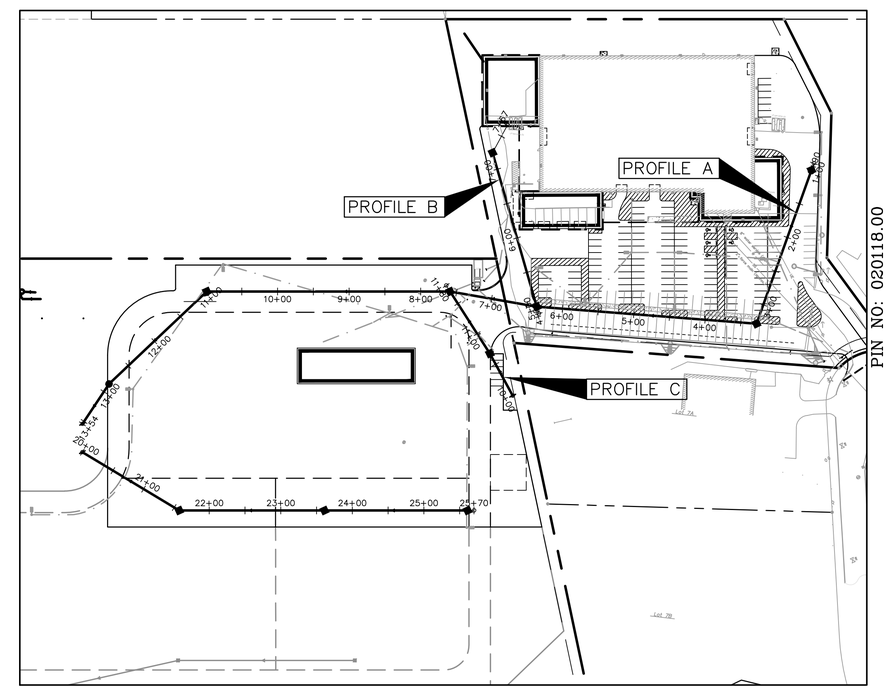
1"=40' HORIZ.
1"=4' VERT.



PROFILE 'B'

1"=40' HORIZ.
1"=4' VERT.

NOTE: CATCH BASIN AND MANHOLE RIMS LOCATED IN THE GRAVEL SOUTH LOT SHALL BE TEMPORARILY SET 4" LOWER THAN RIM ELEVATIONS GIVEN UNTIL OWNER PAVES THIS AREA.



ORIENTATION MAP

NOT TO SCALE

ISSUED FOR BID

FEBRUARY 5, 2014

Gorrill–Palmer Consulting Engineers, Inc.
PO Box 1237 *Engineering Excellence Since 1998* 207–657–6910
15 Shaker Road FAX: 207–657–6912
Gray, ME 04039 E–Mail: mailbox@gorrillpalmer.com

Allied Engineering
Structural Mechanical Electrical Commissioning
160 Veranda Street
Portland, Maine 04103
207.221.2260
207.221.2266
www.allied-eng.com

Allied Project No: 13057 Cad File:

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

	DATE
COMMISSIONER:	
CHIEF ENGINEER:	

STATE OF MAINE
WILLIAM C. HASKELL
No. 8518
LICENSED
PROFESSIONAL ENGINEER
12/7/2013

PROJECT INFORMATION	
PROGRAM	
PROJECT MANAGER	
DESIGNER	ALLIED ENG., INC.
CONSULTANT	GORRILL–PALMER
PROJECT RESIDENT	
CONTRACTOR	
PROJECT COMPLETION DATE	–

SIGNATURE –
ARCH. LIN. NUMBER
DATE FEBRUARY 5, 2014

PIN NO: 020118.00

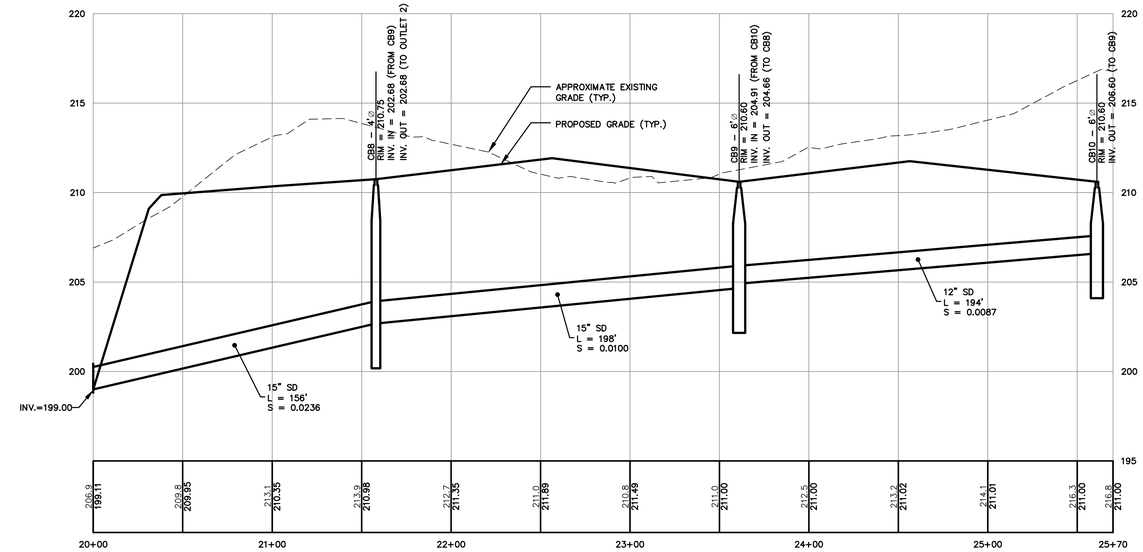
66 INDUSTRIAL DRIVE–PHASE 1

66 INDUSTRIAL DRIVE, AUGUSTA, MAINE
MAINE DEPARTMENT OF TRANSPORTATION

STORM DRAIN PROFILES

SHEET NUMBER
C401

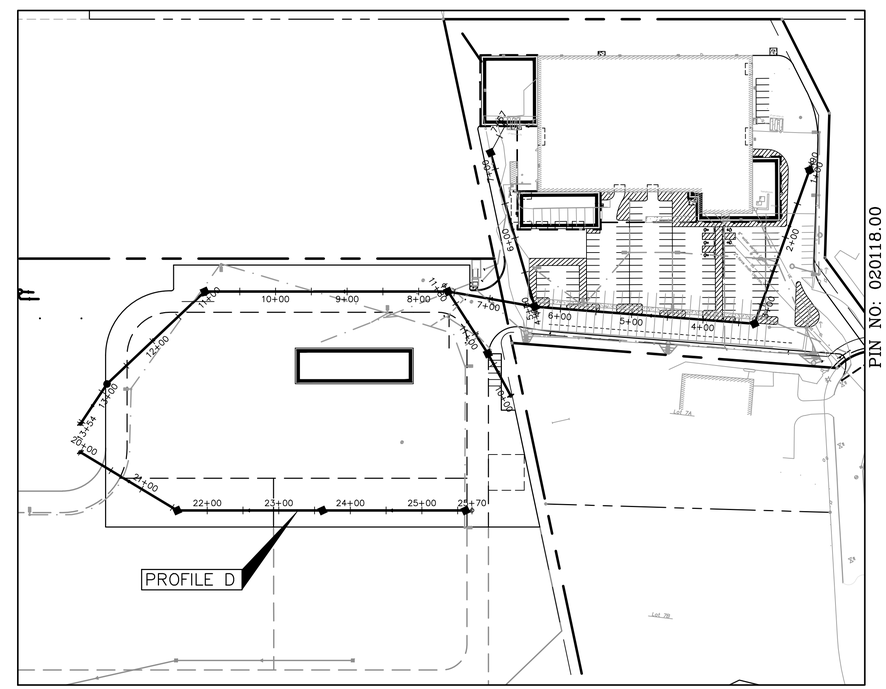
U:\2798_Allied Engineering_MaineDOT Fleet Services\Z – CAD\dwg\2798-PRFL-DRAIN.dwg Feb 04, 2014 – 9:03am



PROFILE 'D'

1"=40' HORIZ.
1"=4' VERT.

NOTE: CATCH BASIN AND MANHOLE RIMS LOCATED IN THE GRAVEL SOUTH LOT SHALL BE TEMPORARILY SET 4" LOWER THAN RIM ELEVATIONS GIVEN UNTIL OWNER PAVES THIS AREA.



ORIENTATION MAP

NOT TO SCALE

PIN NO: 020118.00

ISSUED FOR BID
FEBRUARY 5, 2014

Gorrill–Palmer Consulting Engineers, Inc.
PO Box 1237
15 Shaker Road
Gray, ME 04039
Engineering Excellence Since 1998
207–657–6910
FAX: 207–657–6912
E–Mail: mailbox@gorrillpalmer.com

Allied Engineering
Structural Mechanical Electrical Commissioning
160 Veranda Street
Portland, Maine 04103
207.221.2260
207.221.2266
www.allied-eng.com

Allied Project No: 13057 Cad File:

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

	DATE
COMMISSIONER:	
CHIEF ENGINEER:	

STATE OF MAINE
WILLIAM C. HASKELL
No. 8518
LICENSED
PROFESSIONAL ENGINEER
1/27/2014

PROJECT INFORMATION		
PROGRAM		SIGNATURE
PROJECT MANAGER		–
DESIGNER	ALLIED ENG., INC.	ARCH. LIN. NUMBER
CONSULTANT	GORRILL–PALMER	
PROJECT RESIDENT		
CONTRACTOR		DATE FEBRUARY 5, 2014
PROJECT COMPLETION DATE	–	

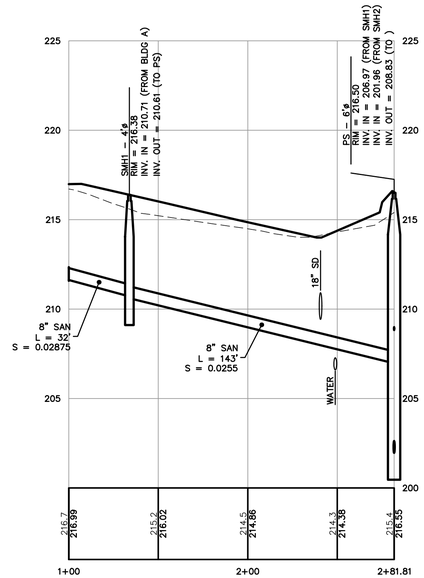
66 INDUSTRIAL DRIVE–PHASE 1

66 INDUSTRIAL DRIVE, AUGUSTA, MAINE
MAINE DEPARTMENT OF TRANSPORTATION

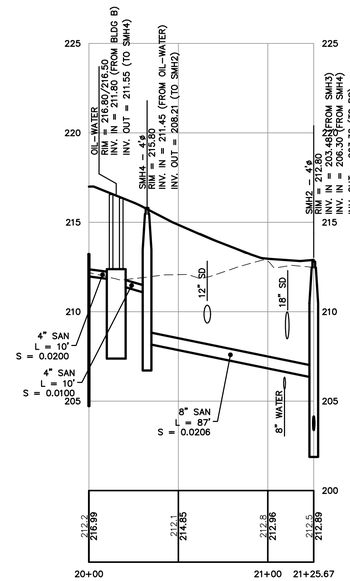
STORM DRAIN PROFILES

SHEET NUMBER
C402

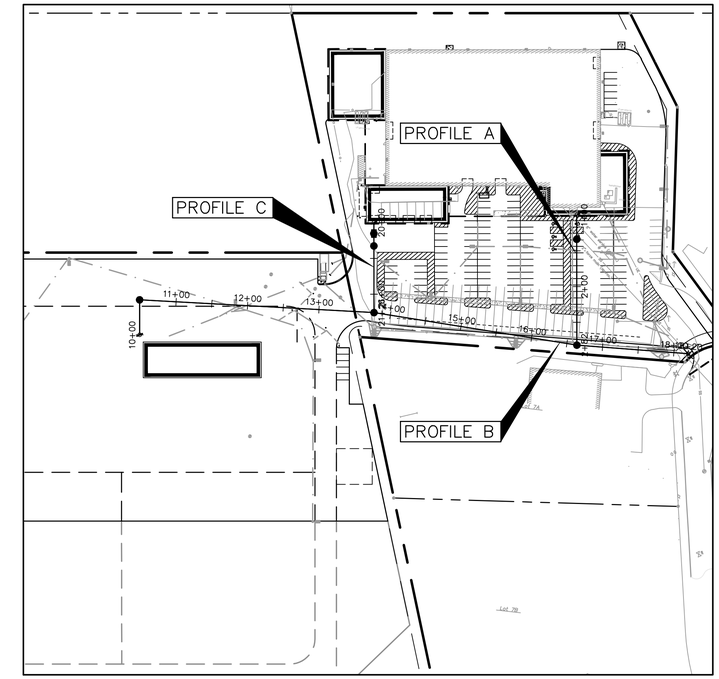
U:\2798_Allied Engineering_MaineDOT Fleet Services\Z – CAD\dwg\2798-PRFL-DRAIN.dwg Feb 04, 2014 – 9:03am



PROFILE 'A'
1"=40' HORIZ.
1"=4' VERT.

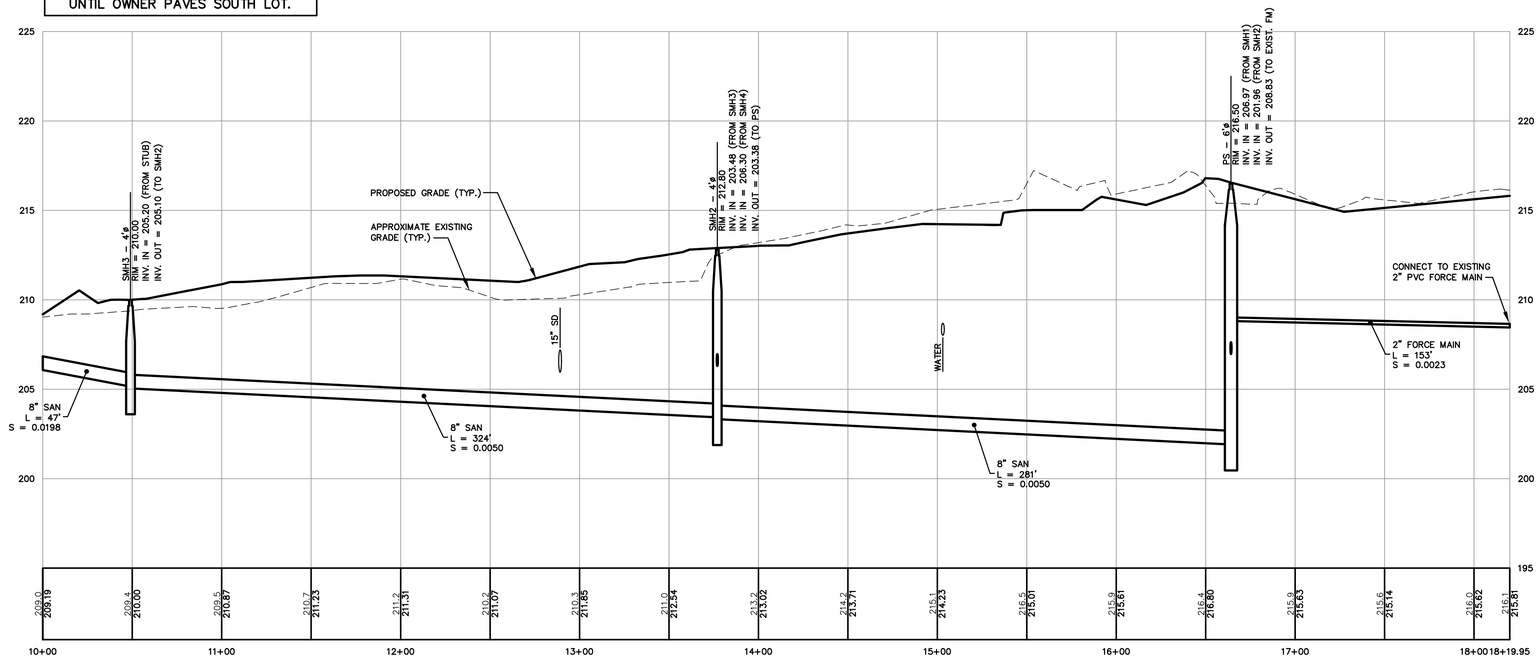


PROFILE 'C'
1"=40' HORIZ.
1"=4' VERT.



ORIENTATION MAP
NOT TO SCALE

NOTE: RIM ELEVATION FOR SMH3 SHALL BE TEMPORARILY SET 4" LOWER THAN RIM ELEVATION GIVEN UNTIL OWNER PAVES SOUTH LOT.



PROFILE 'B'
1"=40' HORIZ.
1"=4' VERT.

ISSUED FOR BID
FEBRUARY 5, 2014

Gorrill–Palmer Consulting Engineers, Inc.
Engineering Excellence Since 1998
PO Box 1237
15 Shaker Road
Gray, ME 04039
207–657–6910
FAX: 207–657–6912
E–Mail: mailbox@gorrillpalmer.com

Allied Engineering
Structural Mechanical Electrical Commissioning
160 Veranda Street
Portland, Maine 04103
207.221.2260
207.221.2266
www.allied-eng.com

Allied Project No: 13057 Cad File:

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

	DATE
COMMISSIONER:	
CHIEF ENGINEER:	

STATE OF MAINE
WILLIAM C. HASKELL
No. 8518
LICENSED
PROFESSIONAL ENGINEER
1/27/2014

PROJECT INFORMATION	
PROGRAM	
PROJECT MANAGER	
DESIGNER	ALLIED ENG., INC.
CONSULTANT	GORRILL–PALMER
PROJECT RESIDENT	
CONTRACTOR	
PROJECT COMPLETION DATE	–

SIGNATURE
–
ARCH. LIN. NUMBER
DATE FEBRUARY 5, 2014

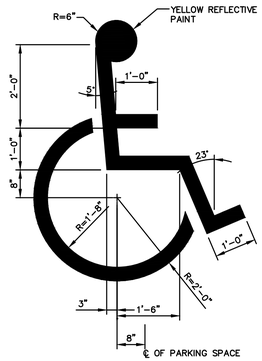
PIN NO: 020118.00

66 INDUSTRIAL DRIVE–PHASE 1
66 INDUSTRIAL DRIVE, AUGUSTA, MAINE
MAINE DEPARTMENT OF TRANSPORTATION

SANITARY SEWER PROFILES

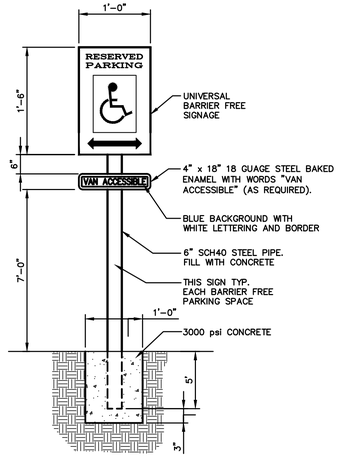
SHEET NUMBER
C403

U:\2798_Allied Engineering_MaineDOT Fleet Services\Z - CAD\dwg\2798-PRFL-SAN.dwg Feb 04, 2014 - 9:03am



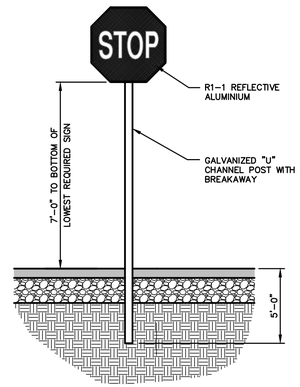
INTERNATIONAL BARRIER FREE SYMBOL

NOT TO SCALE



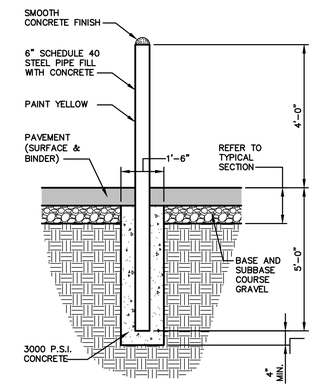
BARRIER FREE PARKING SIGN

NOT TO SCALE



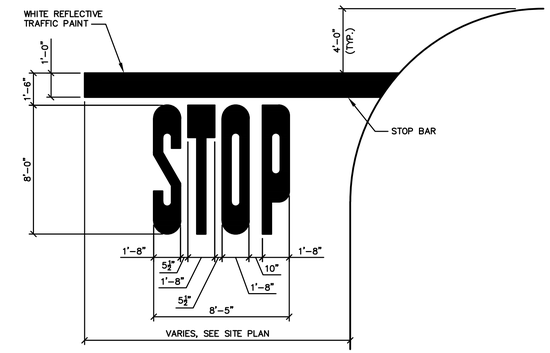
STOP SIGN

NOT TO SCALE



BOLLARD

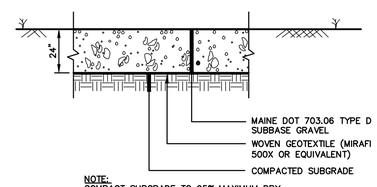
NOT TO SCALE



NOTE:
ALL TRAFFIC MARKINGS TO BE SOLID WHITE REFLECTIVE TRAFFIC PAINT AS PER DIMENSIONS BELOW.

PAVEMENT MARKINGS

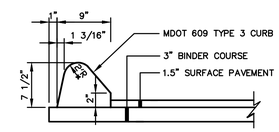
NOT TO SCALE



NOTE:
COMPACT SUBGRADE TO 95% MAXIMUM DRY DENSITY IN ACCORDANCE WITH ASTM D-1557

GRAVEL SURFACE SECTION

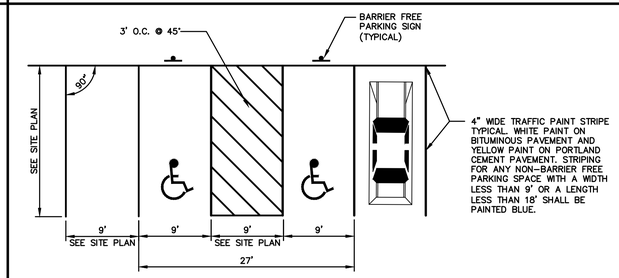
NOT TO SCALE



NOTE:
CONSTRUCT CURB IN ACCORDANCE WITH MDOT SPECIFICATION SECTION 609.

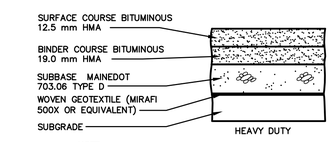
TYPE 3 CURB DETAIL

NOT TO SCALE



PARKING SPACE DIMENSIONS

NOT TO SCALE



NOTE:
COMPACT SUBGRADE TO 95% MAXIMUM DRY DENSITY IN ACCORDANCE WITH ASTM D-1557

THICKNESS OF LAYERS

LAYERS	HEAVY DUTY
SURFACE COURSE BITUMINOUS 12.5mm HMA	1 1/2"
BINDER COURSE BITUMINOUS 19.0mm HMA	2 1/2"
AGGREGATE SUBBASE GRAVEL MAINEDOT 703.06 TYPE D	24"

BITUMINOUS PAVEMENT SECTION

NOT TO SCALE

PIN NO: 020118.00

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

DATE
COMMISSIONER:
CHIEF ENGINEER:

STATE OF MAINE
WILLIAM C. HASKELL
No. 8518
1/27/2014
LICENSED
PROFESSIONAL ENGINEER

PROJECT INFORMATION		
PROGRAM		SIGNATURE
PROJECT MANAGER	ALLIED ENG., INC.	ARCH. LIN. NUMBER
DESIGNER	GORRILL-PALMER	DATE FEBRUARY 5, 2014
CONSULTANT		
PROJECT RESIDENT		
CONTRACTOR		
PROJECT COMPLETION DATE	-	

66 INDUSTRIAL DRIVE-PHASE 1

66 INDUSTRIAL DRIVE, AUGUSTA, MAINE
MAINE DEPARTMENT OF TRANSPORTATION

SITE DETAILS

SHEET NUMBER
C500

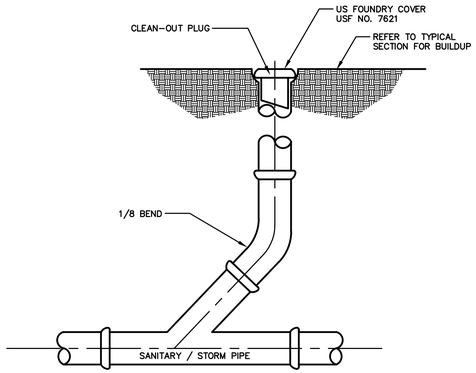
ISSUED FOR BID
FEBRUARY 5, 2014

Gorrill-Palmer Consulting Engineers, Inc.
PO Box 1237
15 Shaker Road
Gray, ME 04039
Engineering Excellence Since 1998
207-657-6910
FAX: 207-657-6912
E-Mail: mailbox@gorrillpalmer.com

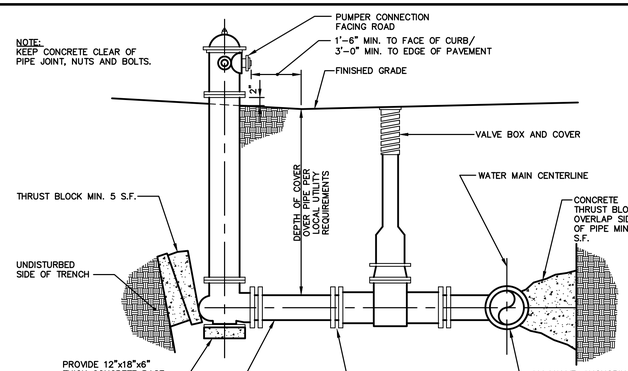
Allied Engineering
Structural Mechanical Electrical Commissioning
160 Veranda Street
Portland, Maine 04103
207.221.2260
207.221.2266
www.allied-eng.com

Allied Project No: 13057 Cad File:

U:\2798_Allied Engineering_MaineDOT Fleet Services\Z - CAD\dwg\2798-DETAILS.dwg Feb 04, 2014 - 9:03am



CLEANOUT
NOT TO SCALE



NOTE: SEE NOTE 3 IN
WATER UTILITY NOTES

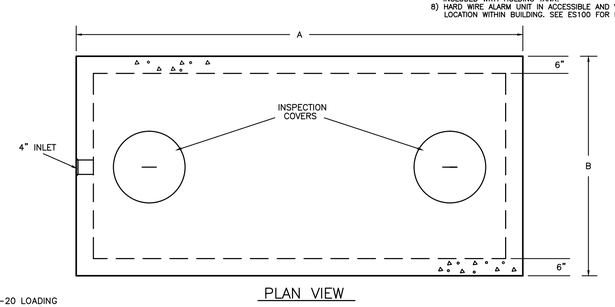
FIRE HYDRANT INSTALLATION
NOT TO SCALE

DATA CHART

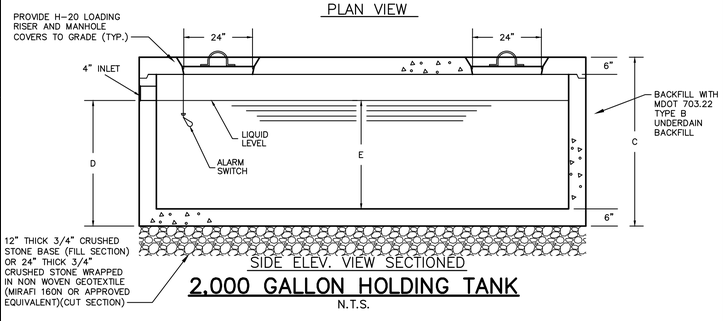
ITEM NO. STD.	ITEM NO. H.D.	GALLON CAPACITY	A	B	C	D	E	APPROX. WEIGHTS
	HT-2000-HD	2,000	13'-0"	7'-0"	4'-11"	4'-0"	3'-6"	TOP 6,800 LBS. BASE 15,000 LBS.

DESIGN DATA & GENERAL NOTES

1) CONCRETE: 4,000 PSI @ 28 DAYS.
2) CEMENT: PORTLAND TYPE I OR III PER ASTM C150.
3) REINFORCING: 6X6X10W.W.M. OR FIBERS.
4) DESIGN LOADING: H-20 LOADING
5) CONSTRUCTION JOINT: SEALED W/ASPHALT.
6) HEAVY-DUTY TANK TOPS REINFORCED W/ 5/8" ROD @ 12"O.C. EACH WAY.
7) ALARM UNIT WITH LIGHT & BUZZER IS INCLUDED WITH HOLDING TANK.
8) HARD WIRE ALARM UNIT IN ACCESSIBLE AND VISIBLE LOCATION WITHIN BUILDING. SEE ES100 FOR LOCATION

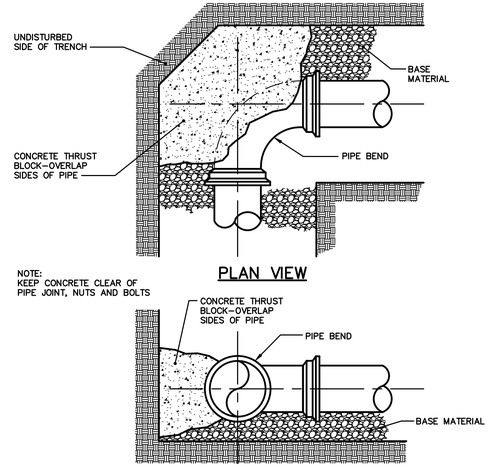


PLAN VIEW



SIDE ELEV. VIEW SECTIONED

2,000 GALLON HOLDING TANK
N.T.S.



PLAN VIEW

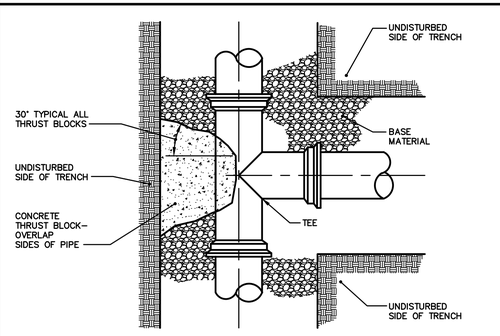
SECTION

THRUST/RETAINER GLAND SCHEDULE		
1/4 BEND	90'	USE POURED IN-PLACE THRUST BLOCK WITH RETAINERS
1/8 BEND	45'	THRUST BLOCK WITH RETAINERS
1/16 BEND	22 1/2'	THRUST BLOCK
1/32 BEND	11 1/4'	THRUST BLOCK

THE ABOVE SCHEDULE IS SUBJECT TO THE APPROVAL OF THE ON-SITE INSPECTOR DUE TO SOILS AND WORKING PRESSURES IN THE AREA.

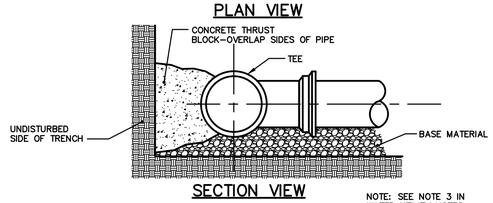
SEE NOTE 3 IN WATER UTILITY NOTES

THRUST BLOCK PLACEMENT ON BENDS
NOT TO SCALE



NOTE: KEEP CONCRETE CLEAR OF
PIPE JOINT, NUTS AND BOLTS

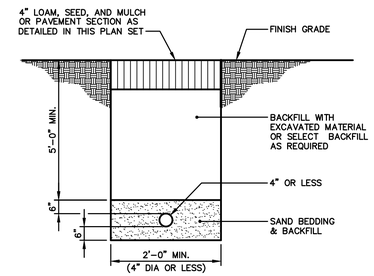
PLAN VIEW



SECTION VIEW

NOTE: SEE NOTE 3 IN
WATER UTILITY NOTES

THRUST BLOCK PLACEMENT ON TEES
NOT TO SCALE



SEE NOTE 3 IN WATER UTILITY NOTES

WATER SERVICE TRENCH SECTION
NOT TO SCALE

1. THE BEARING SURFACE OF THE THRUST BLOCK SHALL BE THE SURFACE AREA OF THE THRUST BLOCK WHICH IS CAST AGAINST THE TRENCH WALL. THE BEARING SURFACE SHALL NOT EXCEED THE FOLLOWING LOADINGS:

IN-SITU CONDITION	ALLOWABLE
BEDROCK	3,000 psf
SAND OR OUTWASH DEPOSITS	1,500 psf
OTHER SOILS	1,000 psf

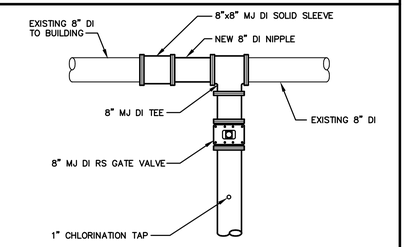
THE THRUST SHALL BE COMPUTED ON THE BASIS OF 150 psi x THE CROSS SECTIONAL AREA OF THE PIPE. FOR EXAMPLE, A THRUST BLOCK FOR A 1/4 BEND ON AN 8" WATER MAIN BEARING AGAINST CLAY WOULD REQUIRE A BEARING SURFACE OF 7.5 s.f.

$$\frac{150 \text{ psi} \times 50 \text{ sq. in.}}{1{,}000 \text{ psf}} = 7.5 \text{ s.f.}$$

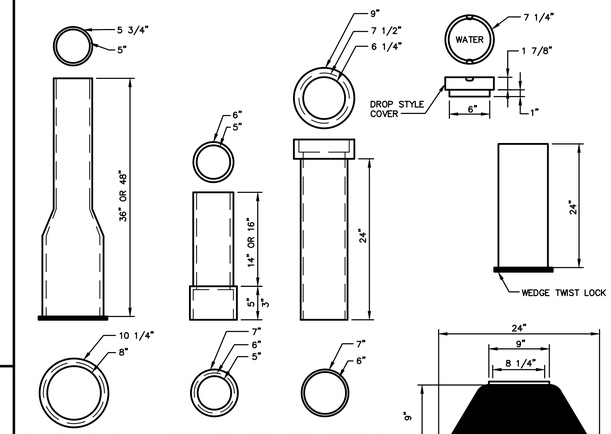
2. INSTALL POLY BARRIER BETWEEN PIPE AND ALL THRUST BLOCKS.

3. ANY WORK RELATED TO WATER PIPING OR DETAILS SHALL BE IN ACCORDANCE WITH THE GREATER AUGUSTA UTILITY DISTRICT SPECIFICATIONS.

WATER UTILITY NOTES



TEE & GATE VALVE CONNECTION
NOT TO SCALE

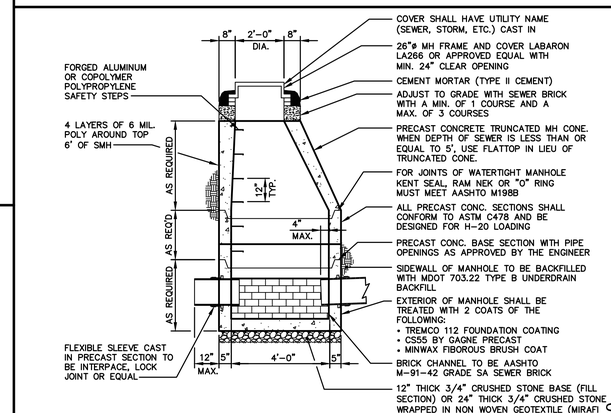


BASE SECTION #645 | INTERMEDIATE SECTION #58 | TOP SECTION #56

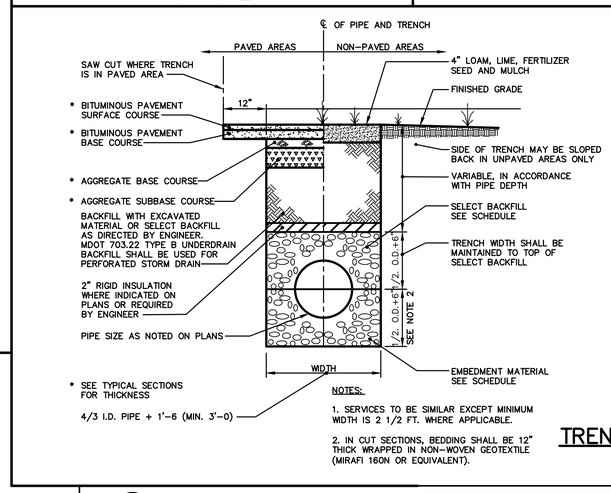
NOTES:
1.BUFFALO VALVE BOXES NUMBERS ARE FOR 5.25"
2. SEE NOTE 3 IN WATER UTILITY NOTES

VALVE BOX BASE FOR USE WITH # 160 AIR VALVES

TYPICAL VALVE BOXES
NOT TO SCALE



4'-0" PRECAST SEWER MANHOLE AND DRAIN MANHOLE
NOT TO SCALE



NOTES:

1. SERVICES TO BE SIMILAR EXCEPT MINIMUM WIDTH IS 2 1/2 FT. WHERE APPLICABLE.

2. IN CUT SECTIONS, BEDDING SHALL BE 12" THICK WRAPPED IN NON-WOVEN GEOTEXTILE (MIRAFI 160N OR EQUIVALENT).

SCHEDULE OF TRENCH BACKFILL		
TYPE OF PIPE	EMBEDMENT MATERIAL	SELECT BACKFILL
CMP DUCTILE IRON RCP	MDOT 703.22 TYPE B UD BACKFILL	MDOT 703.22 TYPE B UD BACKFILL
PVC-SDR 35 HDPE	MDOT 703.22 TYPE C 3/4" CRUSHED STONE	MDOT 703.22 TYPE B UD BACKFILL
PERFORATED PVC-SDR35 HDPE	MDOT 703.22 TYPE C 3/4" CRUSHED STONE	MDOT 703.22 TYPE C 3/4" CRUSHED STONE

NOTE:
1. BRACING AND SHEETING OR OTHER TRENCH PROTECTION TO BE PROVIDED TO MEET APPLICABLE STATE AND O.S.H.A. SAFETY STANDARDS. ALL SUCH TRENCH PROTECTION TO BE THE RESPONSIBILITY OF THE CONTRACTOR.

2. INSTALL WARNING TAPE DIRECTLY ABOVE UTILITIES, 12" BELOW FINISH GRADE.

MINIMUM COVER	PIPE
2'-0"	DRAIN (1)
5'-5"	WATER
5'-0"	SEWER

(1) COVER BETWEEN 2' AND 3' SHALL INCLUDE 4" RIGID INSULATION. COVER BETWEEN 3' AND 4' SHALL INCLUDE 2" RIGID INSULATION.

TRENCH SECTION
N.T.S.

ISSUED FOR BID
FEBRUARY 5, 2014

Gorrill-Palmer Consulting Engineers, Inc.
PO Box 1237 Engineering Excellence Since 1998 207-657-6910
15 Shaker Road FAX: 207-657-6912
Gray, ME 04039 E-Mail: mailbox@gorrillpalmer.com

Allied Engineering
Structural Mechanical Electrical Commissioning
160 Veranda Street
Portland, Maine 04103
207.221.2260
207.221.2266
www.allied-eng.com

Allied Project No: 13057 Cad File:

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

	DATE
COMMISSIONER:	
CHIEF ENGINEER:	

STATE OF MAINE
WILLIAM C. HASKELL
No. 8518
1/27/2014
LICENSED
PROFESSIONAL ENGINEER

PROJECT INFORMATION	SIGNATURE
PROGRAM	–
PROJECT MANAGER	
DESIGNER	ALLIED ENG., INC.
CONSULTANT	GORRILL-PALMER
PROJECT RESIDENT	
CONTRACTOR	
PROJECT COMPLETION DATE	–

ARCH. LIN. NUMBER
DATE FEBRUARY 5, 2014

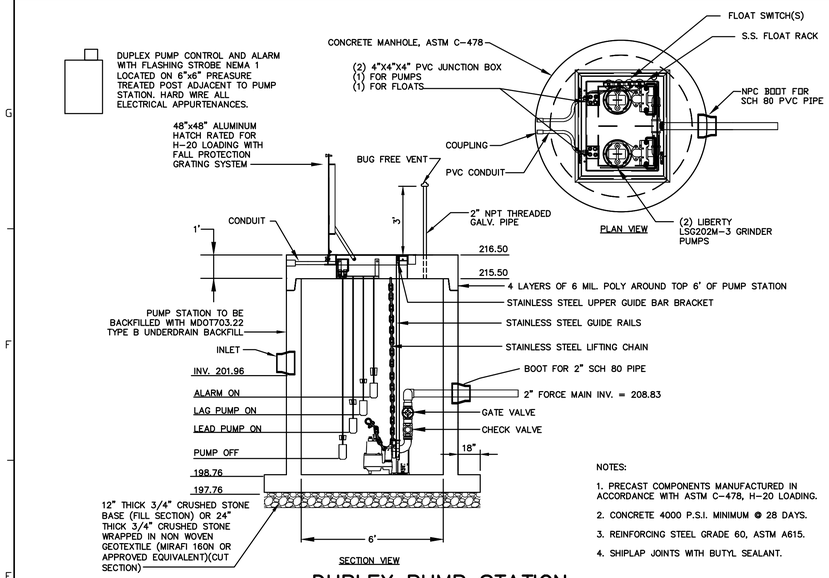
PIN NO: 020118.00

66 INDUSTRIAL DRIVE-PHASE 1
66 INDUSTRIAL DRIVE, AUGUSTA, MAINE
MAINE DEPARTMENT OF TRANSPORTATION

UTILITY DETAILS

SHEET NUMBER
C501

U:\2798_Allied Engineering_MaineDOT Fleet Services\Z - CAD\dwg\2798-DETAILS.dwg Feb 04, 2014 - 9:03am



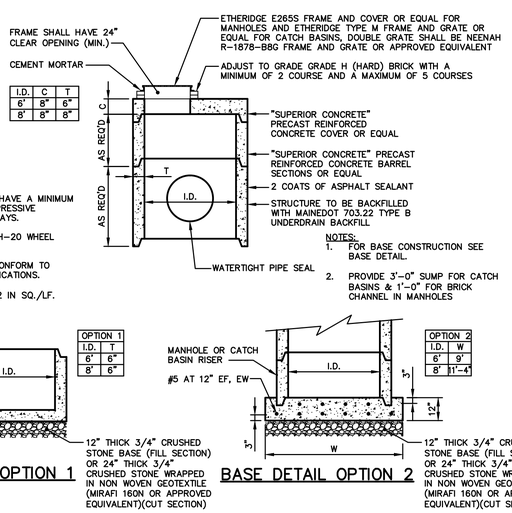
NOTES:

1. PRECAST COMPONENTS MANUFACTURED IN ACCORDANCE WITH ASTM C-478, H-20 LOADING.
2. CONCRETE 4000 P.S.I. MINIMUM @ 28 DAYS.
3. REINFORCING STEEL GRADE 60, ASTM A615.
4. SHIPLAP JOINTS WITH BUTYL SEALANT.

DUPLEX PUMP STATION

NOT TO SCALE

PUMP STATION	SHEET LOCATION		PUMP STATION SETTING DATA				PUMP CONTROL SETTING DATA				PUMP OPERATING CONDITIONS				
DESCRIPTION	UTILITY PLAN SHEET	PROFILE SHEET	TOP OF COVER SLAB	BOTTOM OF BASE SLAB	8" EFF. SEWER INVERT	℄ FORCE MAIN OUTLET	PUMP OFF	LEAD PUMP ON	LAG PUMP ON	ALARM ON	NUMBER OF PUMPS	PUMP DISCHARGE	PUMP RATE	TOTAL DYNAMIC HEAD	PUMP H.P.
MAINE DOT/BGS FLEET SERVICES	C201	C403	214.50	197.76	201.96/ 206.97	208.91	199.26	201.96	202.46	202.96	2	1 1/4"	47 GPM	50'	2



I.D.	C	T
6'	8"	6"
8'	8"	8"

DESIGN NOTES:

1. ALL CONCRETE TO HAVE A MINIMUM OF 4,000 PSI COMPRESSIVE STRENGTH AT 28 DAYS.
2. DESIGN LOAD FOR H-20 WHEEL LOAD.
3. CATCH BASIN TO CONFORM TO ASTM-C478 SPECIFICATIONS.
4. REINFORCE TO 0.12 IN SQ./LF.

NOTES:

1. FOR BASE CONSTRUCTION SEE BASE DETAIL.
2. PROVIDE 3'-0" SUMP FOR CATCH BASINS & 1'-0" FOR BRICK CHANNEL IN MANHOLES

OPTION 1	
I.D.	T
6'	6"
8'	6"

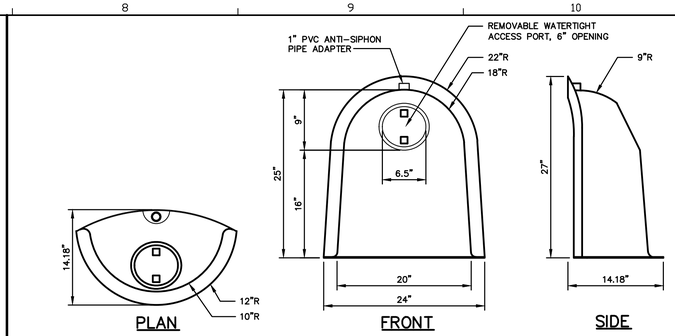
BASE DETAIL OPTION 1

OPTION 2	
I.D.	W
6'	9'
8'	11'-4

BASE DETAIL OPTION 2

LARGE DIAMETER STORM DRAIN MANHOLE AND CATCH BASIN WITH FLAT TOP

NOT TO SCALE



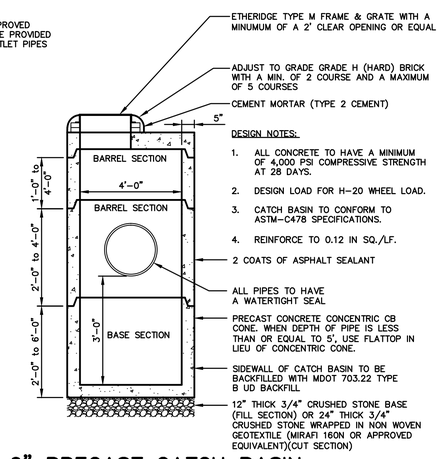
"THE SNOUT"

NOT TO SCALE

NOTE:
FOR USE ON CATCH BASIN OUTLET 18" IN DIAMETER AND LESS

NOTES:

1. "THE SNOUT" OR APPROVED EQUIVALENT SHALL BE PROVIDED ON CATCH BASIN OUTLET PIPES 18" OR LESS.

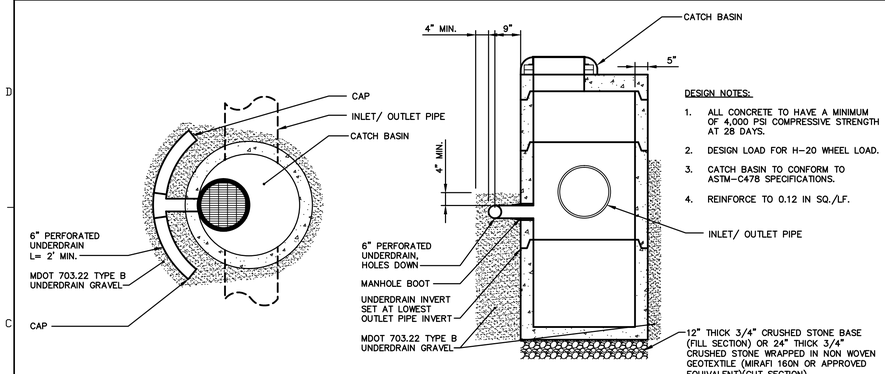


DESIGN NOTES:

1. ALL CONCRETE TO HAVE A MINIMUM OF 4,000 PSI COMPRESSIVE STRENGTH AT 28 DAYS.
2. DESIGN LOAD FOR H-20 WHEEL LOAD.
3. CATCH BASIN TO CONFORM TO ASTM-C478 SPECIFICATIONS.
4. REINFORCE TO 0.12 IN SQ./LF.

4'-0" PRECAST CATCH BASIN

NOT TO SCALE

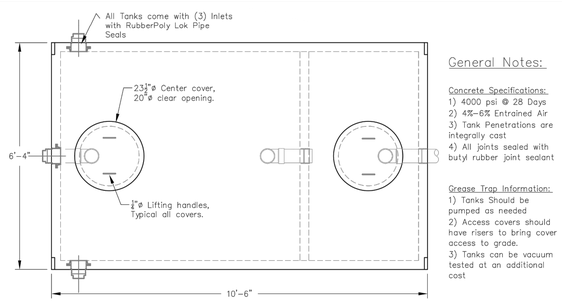


DESIGN NOTES:

1. ALL CONCRETE TO HAVE A MINIMUM OF 4,000 PSI COMPRESSIVE STRENGTH AT 28 DAYS.
2. DESIGN LOAD FOR H-20 WHEEL LOAD.
3. CATCH BASIN TO CONFORM TO ASTM-C478 SPECIFICATIONS.
4. REINFORCE TO 0.12 IN SQ./LF.

CATCH BASIN UNDERDRAIN

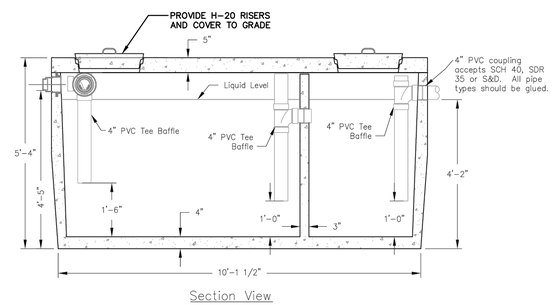
NOT TO SCALE



General Notes:

Concrete Specifications:
1) 4000 psi @ 28 Days
2) 4%-6% Entrained Air
3) Tank Penetrations are integrally cast
4) All joints sealed with butyl rubber joint sealant

Grease Trap Information:
1) Tanks Should be pumped as needed
2) Access covers should have risers to bring cover access to grade.
3) Tanks can be vacuum tested at an additional cost



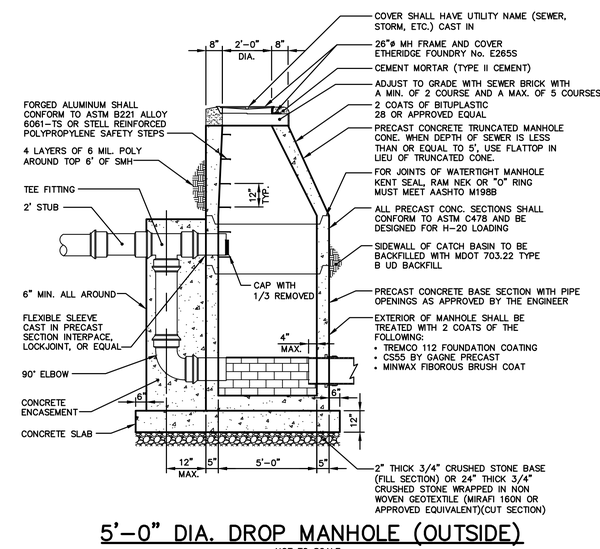
NOTE: TANK SHALL BE SET ON:

FULL SECTION: 12" THICK 3/4" CRUSHED STONE BASE

CUT SECTION: 24" THICK 3/4" CRUSHED STONE WRAPPED IN NON-WOVEN GEOTEXTILE (MIRAFI 160N OR APPROVED EQUIVALENT)

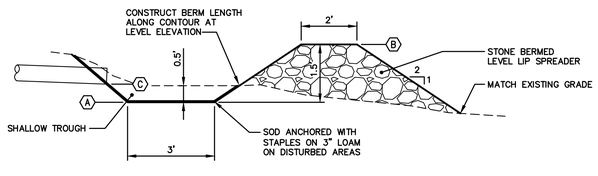
1,500 GAL. 2 COMP OIL/WATER SEPARATOR

NOT TO SCALE



5'-0" DIA. DROP MANHOLE (OUTSIDE)

NOT TO SCALE



LEVEL LIP SPREADER SCHEDULE				
		(A)	(B)	(C)
LEVEL LIP	BERM WIDTH	BOTTOM ELEVATION	TOP BERM ELEVATION	PIPE INVERT
1	15'	195	196.50	195.50

BERM STONE SIZE	
SIEVE DESIGNATION (US CUSTOMARY)	PERCENT BY WEIGHT PASSING
12 IN	100
6 IN	84-100
3 IN	68-83
1 IN	42-55
NO. 4	8-12

STONE BERM LEVEL LIP SPREADER

NOT TO SCALE

ISSUED FOR BID
FEBRUARY 5, 2014

Gorrill-Palmer Consulting Engineers, Inc.
Engineering Excellence Since 1998
PO Box 1237
15 Shaker Road
Gray, ME 04039
207-657-6910
FAX: 207-657-6912
E-Mail: mailbox@gorrillpalmer.com

Allied Engineering
Structural Mechanical Electrical Commissioning
160 Veranda Street
Portland, Maine 04103
207.221.2260
207.221.2266
www.allied-eng.com

Allied Project No: 13057 Cad File:

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

DATE
COMMISSIONER:
CHIEF ENGINEER:

STATE OF MAINE
WILLIAM C. HASKELL
No. 8518
12/7/2013
LICENSED
PROFESSIONAL ENGINEER

SIGNATURE
ARCH. LIN. NUMBER
DATE FEBRUARY 5, 2014

PROJECT INFORMATION

PROGRAM	
PROJECT MANAGER	SIGNATURE
DESIGNER	ALLIED ENG., INC.
CONSULTANT	GORRILL-PALMER
PROJECT RESIDENT	
CONTRACTOR	
PROJECT COMPLETION DATE	-

PIN NO: 020118.00

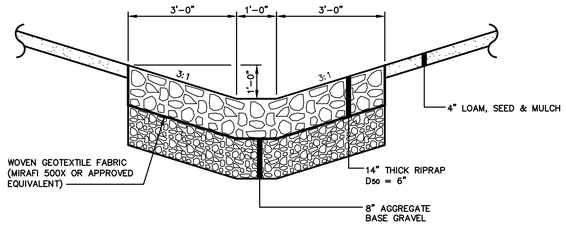
66 INDUSTRIAL DRIVE-PHASE 1

66 INDUSTRIAL DRIVE, AUGUSTA, MAINE
MAINE DEPARTMENT OF TRANSPORTATION

DRAINAGE/UTILITY DETAILS

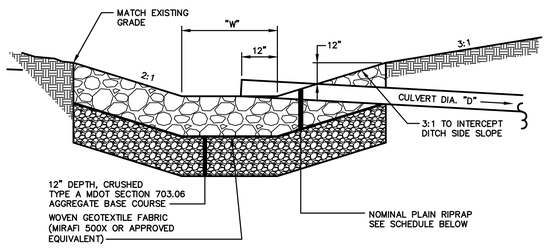
SHEET NUMBER
C502

U:\2798_Allied Engineering_MaineDOT Fleet Services\Z - CAD\dwg\2798-DETAILS.dwg Feb 04, 2014 - 9:03am

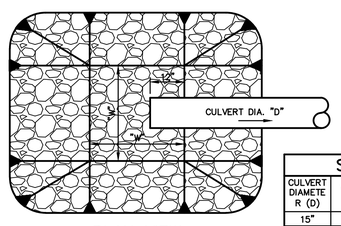


NOTE:
ALL MATERIALS SHALL CONFORM TO THE CURRENT EDITION OF THE MDOT STANDARD SPECIFICATIONS.

RIP RAP SWALE
NOT TO SCALE



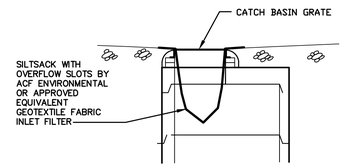
SECTION VIEW



PLAN VIEW

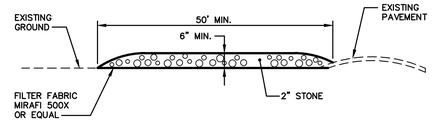
SCHEDULE			
CULVERT DIAMETER (D)	WIDTH (W)	STONE d50	RIPRAP THICKNESS
15"	4'	6"	14"
18"	4'	6"	14"
24"	4'	6"	14"

CULVERT INLET APRON
NOT TO SCALE

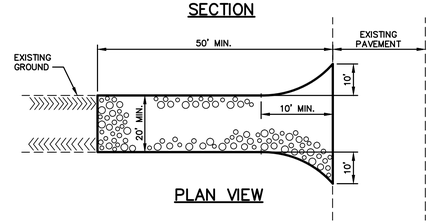


CATCH BASIN INLET FILTER
NOT TO SCALE

NOTE: CONTRACTOR SHALL ADD STONE TO ENTRANCE AS MUD/SILT MATERIAL ACCUMULATES

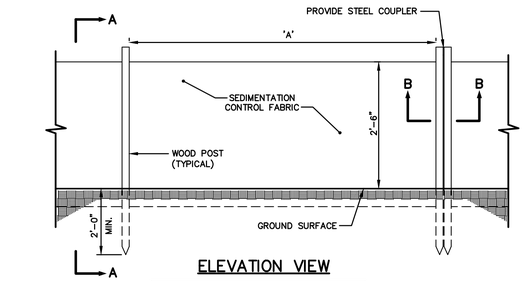


SECTION



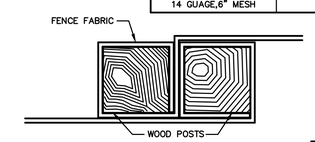
PLAN VIEW

STABILIZED CONSTRUCTION ENTRANCE
NOT TO SCALE

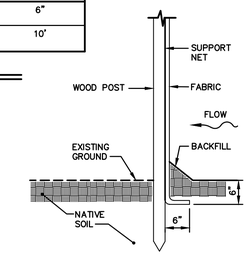


ELEVATION VIEW

SILT FENCE	
SILT FENCE REINFORCEMENT	MAXIMUM SPACING "A"
NONE	6"
WIRE REINFORCE,MENT 14 GUAGE,6" MESH	10'

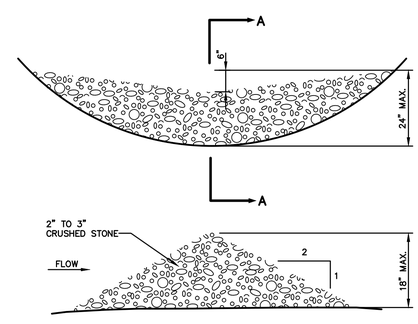


SECTION B–B

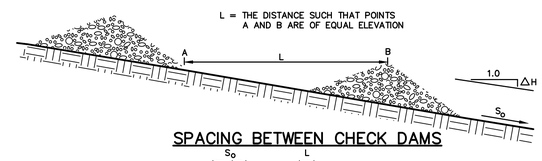


SECTION A–A

SILTATION FENCE
NOT TO SCALE



SECTION A–A



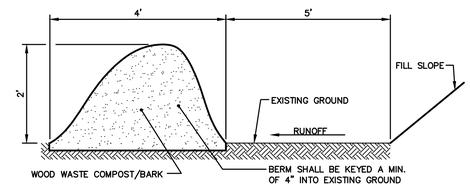
SPACING BETWEEN CHECK DAMS

S_o (FT./FT.)	L (FT.)
0.020	75
0.030	50
0.040	40
0.050	30
0.080	20
0.100	10

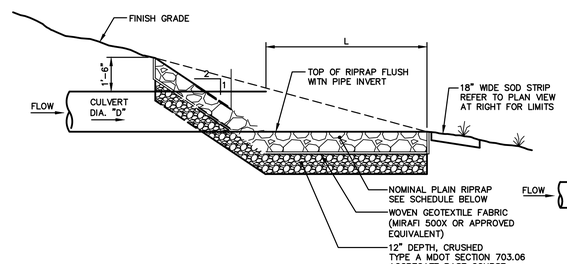
STONE CHECK DAM
NOT TO SCALE

NOTES:

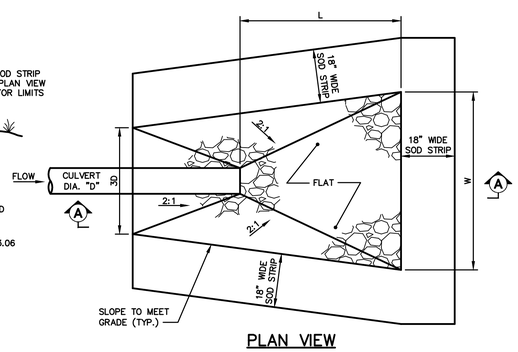
1. THE WOOD WASTE COMPOST/BARK MIX SHALL CONFORM TO THE FOLLOWING STANDARDS:
   A. MOISTURE CONTENT – 30–60%
   B. pH – 5.0 – 8.0.
   C. SCREEN SIZE – 100% LESS THAN 3", MAX. 70% LESS THAN 1".
   D. NO LESS THAN 40% ORGANIC MATERIAL (DRY WEIGHT) BY LOSS OF IGNITION.
   E. NO STONES LARGER THAN 2" IN DIAMETER.
   F. SILTS, CLAYS OR SUGAR SANDS ARE NOT ACCEPTABLE IN THE MIX.
2. THE COMPOST BERM SHALL BE PLACED, UNCOMPACTED, ALONG A RELATIVELY LEVEL CONTOUR.
3. THE WOOD WASTE COMPOST/BARK FILTER BERM MAY BE USED IN LIEU OF SILTATION FENCE, AT THE TOE OF SHALLOW SLOPES, ON FROZEN GROUND, LEDGE OUT CROPS, VERY ROOTED FORESTED AREA OR AT THE EDGE OF GRAVEL PARKING AREAS.
4. BERMS SHALL REMAIN IN PLACE UNTIL UPSTREAM AREA IS COMPLETED OR 70% CATCH OF VEGETATION IS ATTAINED. BERMS SHALL BE REMOVED BY SPREADING SUCH THAT NATIVE EARTH CAN BE SEEN BELOW.
5. WOODWASTE COMPOST BARK FILTER SHALL NOT BE USED IN WETLAND AREAS.



WOOD WASTE COMPOST/BARK FILTER BERM DETAIL
NOT TO SCALE



SECTION A–A



PLAN VIEW

SCHEDULE					
	CULVERT DIAMETER (D)	LENGTH (L)	WIDTH (W)	STONE d50	RIPRAP THICKNESS
OUTLET	24"	15'	10'	6"	14"

CULVERT OUTLET APRON
NOT TO SCALE

ISSUED FOR BID
FEBRUARY 5, 2014

Gorrill–Palmer Consulting Engineers, Inc.
Engineering Excellence Since 1998
PO Box 1237
15 Shaker Road
Gray, ME 04039
207–657–6910
FAX: 207–657–6912
E–Mail: mailbox@gorrillpalmer.com

Allied Engineering
Structural Mechanical Electrical Commissioning
160 Veranda Street
Portland, Maine 04103
207.221.2260
207.221.2266
www.allied-eng.com

Allied Project No: 13057 Cad File:

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

DATE
COMMISSIONER:
CHIEF ENGINEER:

STATE OF MAINE
WILLIAM C. HASKELL
No. 8518
1/27/2014
LICENSED
PROFESSIONAL ENGINEER

SIGNATURE
ARCH. LIN. NUMBER
DATE FEBRUARY 5, 2014

PROJECT INFORMATION

PROGRAM	
PROJECT MANAGER	
DESIGNER	ALLIED ENG., INC.
CONSULTANT	GORRILL–PALMER
PROJECT RESIDENT	
CONTRACTOR	
PROJECT COMPLETION DATE	–

PIN NO: 020118.00

66 INDUSTRIAL DRIVE–PHASE 1
66 INDUSTRIAL DRIVE, AUGUSTA, MAINE
MAINE DEPARTMENT OF TRANSPORTATION

DRAINAGE, EROSION AND SEDIMENTATION CONTROL DETAILS

SHEET NUMBER
C503

U:\2798_Allied Engineering_MaineDOT Fleet Services\Z - CAD\dwg\2798-DETAILS.dwg Feb 04, 2014 - 9:03am

1.3.5 EROSION CONTROL MEASURES AND SITE STABILIZATION

THE PRIMARY EMPHASIS OF THE EROSION/SEDIMENTATION CONTROL PLAN, WHICH WILL BE IMPLEMENTED FOR THIS PROJECT, IS AS FOLLOWS:

- DEVELOPMENT OF A CAREFUL CONSTRUCTION SEQUENCE.
- RAPID REVEGETATION OF DENUDED AREAS TO MINIMIZE THE PERIOD OF SOIL EXPOSURE.
- RAPID STABILIZATION OF DRAINAGE PATHS TO AVOID RILL AND GULLY EROSION.
- THE USE OF ON-SITE MEASURES TO CAPTURE SEDIMENT (HAY BALES/ STONE CHECK DAMS/SILT FENCE, ETC.)

THE FOLLOWING TEMPORARY AND PERMANENT EROSION AND SEDIMENT CONTROL DEVICES WILL BE IMPLEMENTED AS PART OF THE SITE DEVELOPMENT. THESE DEVICES SHALL BE INSTALLED AS INDICATED ON THE PLANS OR AS DESCRIBED WITHIN THIS REPORT. FOR FURTHER REFERENCE, SEE THE LATEST EDITION OF THE MAINE EROSION AND SEDIMENT CONTROL BMPS.

A. DEWATERING

WATER FROM CONSTRUCTION TRENCH DEWATERING SHALL 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 50 FEET OF A PROTECTED NATURAL RESOURCE.

B. 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 90% OF AREAS VEGETATED WITH VIGOROUS GROWTH.

C. TEMPORARY EROSION CONTROL MEASURES

THE FOLLOWING MEASURES ARE PLANNED AS TEMPORARY EROSION/SEDIMENTATION CONTROL MEASURES DURING CONSTRUCTION:

1. CRUSHED STONE-STABILIZED CONSTRUCTION ENTRANCE SHALL BE PLACED AT THE ENTRANCE AT INDUSTRIAL DRIVE.

2. SILTATION FENCE OR WOOD WASTE COMPOST BERMS SHALL BE INSTALLED DOWNSTREAM OF ANY DISTURBED AREAS TO TRAP RUNOFF- BORNE SEDIMENTS UNTIL GRASS AREAS ARE REVEGETATED. THE SILT FENCE AND/OR WOOD WASTE COMPOST BERMS SHALL BE INSTALLED PER THE DETAILS PROVIDED IN THIS PACKAGE AND INSPECTED AT LEAST ONCE A WEEK AND BEFORE AND IMMEDIATELY AFTER A STORM EVENT OF 0.5 INCHES OR GREATER, AND AT LEAST DAILY DURING PROLONGED RAINFALL. REPAIRS SHALL BE MADE IF THERE ARE ANY SIGNS OF EROSION OR SEDIMENTATION BELOW THE FENCE OR BERM LINE. IF THERE ARE SIGNS OF UNDERCUTTING AT THE CENTER OR THE EDGES, OR IMPOUNDING OF LARGE VOLUMES OF WATER BEHIND THE FENCE OR BERM, THE BARRIER SHALL BE REPLACED WITH A STONE CHECK DAM. WOOD WASTE COMPOST BERMS ARE NOT TO BE USED ADJACENT TO WETLAND AREAS THAT ARE NOT TO BE DISTURBED.

3. STRAW OR HAY MULCH INCLUDING HYDROSEEDING IS INTENDED TO PROVIDE COVER FOR DENUDED OR SEEDED AREAS UNTIL REVEGETATION IS ESTABLISHED. MULCH PLACED BETWEEN APRIL 15TH AND OCTOBER 15TH ON SLOPES OF LESS THEN 15 PERCENT SHALL BE ANCHORED BY APPLYING WATER; MULCH PLACED ON SLOPES OF EQUAL TO OR STEEPER THAN 15 PERCENT SHALL BE COVERED BY A FABRIC NETTING AND ANCHORED WITH STAPLES IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATION. FABRIC NETTING AND STAPLES SHALL BE USED ON DISTURBED AREAS WITHIN 50' OF LAKES, STREAMS, AND WETLANDS REGARDLESS OF THE UPSTREAM SLOPE. MULCH PLACED BETWEEN OCTOBER 15TH AND APRIL 15TH ON SLOPES EQUAL TO OR STEEPER THAN 8 PERCENT SHALL BE COVERED WITH A FABRIC NETTING AND ANCHORED WITH STAPLES IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. SLOPES STEEPER THAN 3:1 AND EQUAL TO OR FLATTER THAN 2:1, WHICH ARE TO BE REVEGETATED, SHALL RECEIVE CURLEX BLANKETS BY AMERICAN EXCELSIOR OR EQUAL. SLOPES STEEPER THAN 2:1 SHALL RECEIVE RIPRAP AS NOTED ON THE PLANS. THE MULCH APPLICATION RATE FOR BOTH TEMPORARY AND PERMANENT SEEDING IS 75 LBS PER 1000 SF AS IDENTIFIED IN ATTACHMENT A OF THIS SECTION. MULCH SHALL NOT BE PLACED OVER SNOW.

4. TEMPORARY STOCKPILES OF STUMPS, GRUBBINGS, OR COMMON EXCAVATION WILL BE PROTECTED AS FOLLOWS:

   a) TEMPORARY STOCKPILES SHALL NOT BE LOCATED WITHIN 100 FEET OF ANY WETLANDS WHICH WILL NOT BE DISTURBED AND SHALL BE LOCATED AWAY FROM DRAINAGE SWALES.

   b) STOCKPILES SHALL BE STABILIZED WITHIN 7 DAYS BY EITHER TEMPORARILY SEEDING THE STOCKPILE BY A HYDROSEED METHOD CONTAINING AN EMULSIFIED MULCH TACKIFIER OR BY COVERING THE STOCKPILE WITH MULCH, SUCH AS HAY, STRAW, OR EROSION CONTROL MIX.

   c) STOCKPILES SHALL BE SURROUNDED BY SEDIMENTATION BARRIER AT THE TIME OF FORMATION.

5. ALL DENUDED AREAS THAT ARE WITHIN 100 FEET OF AN UNDISTURBED WETLAND, WHICH HAVE BEEN ROUGH GRADED AND ARE NOT LOCATED WITHIN A BUILDING PAD, PARKING AREA, OR ACCESS DRIVE SUBBASE AREA, SHALL RECEIVE MULCH OR EROSION CONTROL MESH FABRIC WITHIN 48 HOURS OF INITIAL DISTURBANCE OF SOIL. ALL AREAS WITHIN 100 FEET OF AN UNDISTURBED WETLAND SHALL BE MULCHED PRIOR TO ANY PREDICTED RAIN EVENT REGARDLESS OF THE 48 HOUR WINDOW. IN OTHER AREAS, THE TIME PERIOD MAY BE EXTENDED TO 7 DAYS.

6. FOR WORK, WHICH IS CONDUCTED BETWEEN OCTOBER 15TH AND APRIL 15TH OF ANY CALENDAR YEAR, ALL DENUDED AREAS, SHALL BE COVERED WITH HAY MULCH OR EROSION CONTROL MIX, APPLIED AT TWICE THE NORMAL APPLICATION RATE AND ANCHORED WITH A FABRIC NETTING. THE TIME PERIOD FOR APPLYING MULCH SHALL BE LIMITED TO 2 DAYS FOR ALL AREAS.

7. INDUSTRIAL DRIVE SHALL BE SWEPT TO CONTROL MUD AND DUST AS NECESSARY. ADDITIONAL STONE SHALL BE ADDED TO THE STABILIZED CONSTRUCTION ENTRANCE TO MINIMIZE THE TRACKING OF MATERIAL OFF THE SITE AND ONTO THE SURROUNDING ROADWAYS.

8. DURING GRUBBING OPERATIONS STONE CHECK DAMS SHALL BE INSTALLED AT ANY EVIDENT CONCENTRATED FLOW DISCHARGE POINTS AND AS DIRECTED ON THE EROSION CONTROL PLANS.

9. SILT FENCING WITH A MINIMUM STAKE SPACING OF 6 FEET SHALL BE USED, UNLESS THE FENCE IS SUPPORTED BY WIRE FENCE REINFORCEMENT OF MINIMUM 14 GAUGE AND WITH A MAXIMUM MESH SPACING OF 6 INCHES, IN WHICH CASE STAKES MAY BE SPACED A MAXIMUM OF 10 FEET APART. THE BOTTOM OF THE FENCE SHALL BE ANCHORED.

10. WOOD WASTE COMPOST/BARK BERMS MAY BE USED IN LIEU OF SILTATION FENCING. BERMS SHALL BE REMOVED AND SPREAD IN A LAYER NOT TO EXCEED 3" THICK ONCE UPSTREAM AREAS ARE COMPLETED AND A 90% CATCH OF VEGETATION IS ATTAINED.

11. STORM DRAIN CATCH BASIN INLET PROTECTION SHALL BE PROVIDED THROUGH THE USE OF STONE SEDIMENT BARRIERS OR APPROVED SEDIMENT BAGS (SUCH AS SILT SACK). INSTALLATION DETAILS ARE PROVIDED IN THE PLAN SET. THE BARRIERS SHALL BE INSPECTED AFTER EACH RAINFALL AND REPAIRS MADE AS NECESSARY. SEDIMENT SHALL BE REMOVED AND THE BARRIER RESTORED TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO ½ THE DESIGN DEPTH OF THE BARRIER. THE BARRIER SHALL BE REMOVED WHEN THE TRIBUTARY DRAINAGE AREA HAS BEEN STABILIZED.

12. WATER AND/OR CALCIUM CHLORIDE SHALL BE FURNISHED AND APPLIED IN ACCORDANCE WITH MDOT SPECIFICATIONS – SECTION 637 – DUST CONTROL.

13. LOAM AND SEED IS INTENDED TO SERVE, AS THE PRIMARY PERMANENT REVEGETATIVE MEASURE FOR ALL DENUDED AREAS NOT PROVIDED WITH OTHER EROSION CONTROL MEASURES, SUCH AS RIPRAP. APPLICATION RATES ARE PROVIDED IN ATTACHMENT A OF THIS SECTION. SEEDING SHALL NOT OCCUR OVER SNOW.

D. PERMANENT EROSION CONTROL MEASURES

THE FOLLOWING PERMANENT EROSION CONTROL MEASURES HAVE BEEN DESIGNED AS PART OF THE EROSION/SEDIMENTATION CONTROL PLAN:

1. ALL AREAS DISTURBED DURING CONSTRUCTION, BUT NOT SUBJECT TO OTHER RESTORATION (PAVING, RIPRAP, ETC.) WILL BE LOAMED, LIMED, FERTILIZED, MULCHED, AND SEEDED. FABRIC NETTING, ANCHORED WITH STAPLES, SHALL BE PLACED OVER THE MULCH IN AREAS AS NOTED IN TEMPORARY EROSION CONTROL MEASURES PARAGRAPH 3 OF THIS REPORT. ALL AREAS WITHIN 100 FEET OF AN UNDISTURBED WETLAND SHALL BE MULCHED PRIOR TO ANY PREDICTED RAIN EVENT REGARDLESS OF THE 48 HOUR WINDOW. NATIVE TOPSOIL SHALL BE STOCKPILED AND REUSED FOR FINAL RESTORATION WHEN IT IS OF SUFFICIENT QUALITY.

2. ALL STORM DRAIN PIPE OUTLETS SHALL HAVE RIPRAP APRONS AT THEIR OUTLET TO PROTECT THE OUTLET AND RECEIVING CHANNEL FROM SCOUR AND DETERIORATION. INSTALLATION DETAILS ARE PROVIDED IN THE PLAN SET. THE APRONS SHALL BE INSTALLED AND STABILIZED TO THE EXTENT PRACTICABLE PRIOR TO DIRECTING RUNOFF TO THE TRIBUTARY PIPE OR CULVERT.

3. CATCH BASINS SHALL BE PROVIDED WITH SEDIMENT SUMPS AND INLET HOODS (THE SNOUT) FOR ALL OUTLET PIPES THAT ARE 18" IN DIAMETER OR LESS.

1.4 IMPLEMENTATION SCHEDULE

THE FOLLOWING CONSTRUCTION SEQUENCE SHALL BE REQUIRED TO INSURE THE EFFECTIVENESS OF THE EROSION AND SEDIMENTATION CONTROL MEASURES ARE OPTIMIZED:

IT IS ANTICIPATED THAT THE SITE WORK CONSTRUCTION AND RELATED INFRASTRUCTURE WILL COMMENCE IN WINTER/EARLY SPRING 2014 AND BE COMPLETED BY FALL OF 2014. THE BUILDING CONSTRUCTION WILL LIKELY COMMENCE IN SPRING 2014 AND BE COMPLETED BY WINTER/EARLY SPRING 2014.

NOTE: FOR ALL GRADING ACTIVITIES, THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION NOT TO OVEREXPOSE THE SITE, THIS SHALL BE ACCOMPLISHED BY LIMITING THE DISTURBED AREA.

1. INSTALL STABILIZED CONSTRUCTION ENTRANCE AT THE INTERSECTION OF THE ACCESS DRIVE AND INDUSTRIAL DRIVE.
2. INSTALL PERIMETER SILT FENCE AND/OR WOOD WASTE BERMS PRIOR TO GRUBBING RESPECTIVE AREAS.
3. CLEAR AND GRUB SITE. INSTALL STONE CHECK DAMS AT ANY EVIDENT CONCENTRATED FLOW DISCHARGE POINTS.
4. COMMENCE INSTALLATION OF DRAINAGE APPURTENANCES.
5. COMMENCE EARTHWORK AND GRADING TO SUBGRADE.
6. COMMENCE INSTALLATION OF WATER AND SEWER LINES.
7. CONTINUE EARTHWORK AND GRADING TO SUBGRADE AS NECESSARY FOR CONSTRUCTION.
8. COMPLETE INSTALLATION OF UNDERGROUND UTILITIES TO WITHIN 5' OF THE BUILDINGS.
9. INSTALL LIGHT POLE FOUNDATIONS AND LIGHT POLES.
10. COMPLETE REMAINING EARTHWORK OPERATIONS.
11. COMPLETE INSTALLATION OF CATCH BASINS AND APPURTENANCES.
12. INSTALL SUB-BASE GRAVEL WITHIN PARKING FIELDS AND WALKWAYS.
13. INSTALL BASE COURSE PAVING FOR ACCESS DRIVE AND PARKING AREA AS WELL AS CONCRETE SURFACES.
14. LOAM, LIME, FERTILIZE, SEED AND MULCH DISTURBED AREAS AND COMPLETE ALL LANDSCAPING.
15. INSTALL SURFACE COURSE PAVING FOR ACCESS DRIVE AND PARKING AREAS. STRIPE PER PLAN.
16. ONCE THE SITE IS STABILIZED AND A 90% CATCH OF VEGETATION HAS BEEN OBTAINED, REMOVE ALL TEMPORARY EROSION CONTROL MEASURES.
17. TOUCH UP LOAM AND SEED.

NOTE: ALL DENUDED AREAS NOT SUBJECT TO FINAL PAVING, RIPRAP, OR GRAVEL SHALL BE REVEGETATED.

PRIOR TO CONSTRUCTION OF THE PROJECT, THE CONTRACTOR SHALL SUBMIT TO THE OWNER A SCHEDULE FOR THE COMPLETION OF THE WORK, WHICH WILL SATISFY THE FOLLOWING CRITERIA:

1. THE ABOVE CONSTRUCTION SEQUENCE SHOULD GENERALLY BE COMPLETED IN THE SPECIFIED ORDER; HOWEVER, SEVERAL SEPARATE ITEMS MAY BE CONSTRUCTED SIMULTANEOUSLY. WORK MUST ALSO BE SCHEDULED OR PHASED TO REDUCE THE EXTENT OF THE EXPOSED AREAS AS SPECIFIED BELOW. THE INTENT OF THIS SEQUENCE IS TO PROVIDE FOR EROSION CONTROL AND TO HAVE STRUCTURAL MEASURES SUCH AS SILT FENCE AND CONSTRUCTION ENTRANCES IN PLACE BEFORE LARGE AREAS OF LAND ARE DENUDED.

2. THE WORK SHALL BE CONDUCTED IN SECTIONS WHICH SHALL:

   a) LIMIT THE AMOUNT OF EXPOSED AREA TO THOSE AREAS IN WHICH WORK IS EXPECTED TO BE UNDERTAKEN DURING THE PROCEEDING 30 DAYS.

   b) REVEGETATE DISTURBED AREAS AS RAPIDLY AS POSSIBLE. ALL AREAS SHALL BE PERMANENTLY STABILIZED WITHIN 7 DAYS OF FINAL GRADING OR BEFORE A STORM EVENT; OR TEMPORARILY STABILIZED WITHIN 48 HOURS OF INITIAL DISTURBANCE OF SOIL FOR AREAS WITHIN 100 FEET OF AN UNDISTURBED WETLAND AND 7 DAYS FOR ALL OTHER AREAS. AREAS WITHIN 100 FEET OF AN UNDISTURBED WETLAND SHALL BE MULCHED PRIOR TO ANY PREDICTED RAIN EVENT REGARDLESS OF THE 48 HOUR WINDOW.

   c) INCORPORATE PLANNED INLETS AND DRAINAGE SYSTEM AS EARLY AS POSSIBLE INTO THE CONSTRUCTION PHASE. THE DITCHES SHALL BE IMMEDIATELY LINED OR REVEGETATED AS SOON AS THEIR INSTALLATION IS COMPLETE.

1.5 EROSION, SEDIMENTATION AND STABILIZATION CONTROL PLAN

THE EROSION CONTROL PLAN IS INCLUDED IN THE PLAN SET.

1.6 DETAILS AND SPECIFICATIONS

THE EROSION CONTROL DETAILS AND SPECIFICATIONS ARE INCLUDED IN THE PLAN SET.

1.7 WINTER STABILIZATION PLAN

THE WINTER CONSTRUCTION PERIOD IS FROM NOVEMBER 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 ANY AREA LEFT EXPOSED CAN BE CONTROLLED BY THE CONTRACTOR. LIMIT THE EXPOSED AREA TO THOSE AREAS IN WHICH WORK IS EXPECTED TO BE UNDER TAKEN 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/PARKING 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 S.F. (3 TONS/ACRE) AND SHALL BE PROPERLY ANCHORED.

THE CONTRACTOR SHALL 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 SHALL BE MULCHED FOR OVER WINTER PROTECTION WITH HAY OR STRAW AT TWICE THE NORMAL RATE OR AT 150 LBS/1,000 S.F. (3 TONS PER ACRE) OR WITH A FOUR-INCH LAYER OF WOODWASTE EROSION CONTROL MIX. THIS SHALL BE DONE WITHIN 24 HOURS OF STOCKING AND RE-ESTABLISHED PRIOR TO ANY RAINFALL OR SNOWFALL. ANY SOIL STOCKPILE SHALL NOT BE PLACED (EVEN COVERED WITH HAY OR STRAW) WITHIN 100 FEET FROM ANY NATURAL RESOURCES.

2. NATURAL RESOURCE 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) 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. 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 WOODWASTE FILTER BERMS AS FROZEN SOIL PREVENTS THE PROPER INSTALLATION OF HAY BALES AND SEDIMENT SILT FENCES.

4. MULCHING

AN AREA SHALL BE CONSIDERED 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 1,000 SQUARE FEET OR 3 TONS/ACRE (TWICE THE NORMAL ACCEPTED RATE OF 75-LBS./1,000 S.F. OR 1.5 TONS/ACRE) AND SHALL BE PROPERLY ANCHORED. MULCH SHALL NOT BE SPREAD ON TOP OF SNOW. THE SNOW SHALL BE REMOVED DOWN TO A ONE-INCH DEPTH OR LESS PRIOR TO APPLICATION. AFTER EACH DAY OF FINAL GRADING, THE AREA SHALL 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 (3 TONS/ACRE) AND ADEQUATELY ANCHORED THAT GROUND SURFACE IS NOT VISIBLE THOUGH THE MULCH.

BETWEEN THE DATES OF NOVEMBER 1 AND APRIL 15, ALL MULCH SHALL BE ANCHORED BY PEG LINE, MULCH NETTING, ASPHALT EMULSION CHEMICAL, OR WOOD CELLULOSE FIBER. WHEN GROUND SURFACE IS NOT VISIBLE THROUGH 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 WORKDAY.

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/1,000 S.F. 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 THAT 8%. EROSION CONTROL BLANKETS SHALL BE USED IN LIEU OF MULCH IN ALL DRAINAGE WAYS WITH SLOPES GREATER THAN 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 LOAMED, 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 5 LBS/1,000 S.F. ALL AREAS SEEDED DURING THE WINTER SHALL BE INSPECTED IN THE SPRING FOR ADEQUATE CATCH. ALL AREAS INSUFFICIENTLY 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.

STANDARDS FOR TIMELY STABILIZATION OF CONSTRUCTION SITES DURING WINTER

1. STANDARD FOR THE TIMELY STABILIZATION OF DITCHES AND CHANNELS -- THE APPLICANT SHALL CONSTRUCT AND STABILIZE ALL STONE-LINED DITCHES AND CHANNELS ON THE SITE BY NOVEMBER 15. THE APPLICANT SHALL CONSTRUCT AND STABILIZE ALL GRASS-LINED DITCHES AND CHANNELS ON THE SITE BY SEPTEMBER 1. IF THE APPLICANT FAILS TO STABILIZE A DITCH OR CHANNEL TO BE GRASS-LINED BY SEPTEMBER 1, 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 SHALL 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 SHALL LINE THE DITCH WITH STONE RIPRAP BY NOVEMBER 15. THE APPLICANT SHALL 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 SHALL 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 SHALL CONSTRUCT AND STABILIZE STONE-COVERED SLOPES BY NOVEMBER 15. THE APPLICANT SHALL SEED AND MULCH ALL SLOPES TO BE VEGETATED BY SEPTEMBER 1. THE DEPARTMENT SHALL CONSIDER ANY AREA HAVING A GRADE GREATER THAN 15% TO BE A SLOPE. IF THE APPLICANT FAILS TO STABILIZE ANY SLOPE TO BE VEGETATED BY SEPTEMBER 1, THEN THE APPLICANT SHALL 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 SEPTEMBER 1 THE APPLICANT SHALL 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 APPLICANT SHALL 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 SHALL COVER THE SLOPE WITH A LAYER OF WOODWASTE COMPOST AS DESCRIBED IN ITEM III OF THIS STANDARD OR WITH STONE RIPRAP AS DESCRIBED IN ITEM IV OF THIS STANDARD.

STABILIZE THE SLOPE WITH SOD -- THE APPLICANT SHALL STABILIZE THE DISTURBED SLOPE WITH PROPERLY INSTALLED SOD BY SEPTEMBER 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 SHALL NOT USE LATE-SEASON SOD INSTALLATION TO STABILIZE SLOPES HAVING A GRADE GREATER THAN 33% (3H:1V).

STABILIZE THE SLOPE WITH WOODWASTE COMPOST -- THE APPLICANT SHALL PLACE A SIX-INCH LAYER OF WOODWASTE COMPOST ON THE SLOPE BY NOVEMBER 15. PRIOR TO PLACING THE WOODWASTE COMPOST, THE APPLICANT SHALL REMOVE ANY SNOW ACCUMULATION ON THE DISTURBED SLOPE. THE APPLICANT SHALL NOT USE WOODWASTE 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 SHALL PLACE A LAYER OF STONE RIPRAP ON THE SLOPE BY NOVEMBER 15. THE APPLICANT SHALL 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 SHALL 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 SHALL TAKE ONE OF THE FOLLOWING ACTIONS TO STABILIZE THE SOIL FOR LATE FALL AND WINTER.

STABILIZE THE SOIL WITH TEMPORARY VEGETATION -- BY SEPTEMBER 1 THE APPLICANT SHALL 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 SHALL 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 SOIL BEFORE NOVEMBER 1, THEN THE APPLICANT SHALL MULCH THE AREA FOR OVER-WINTER PROTECTION AS DESCRIBED BELOW.

STABILIZE THE SOIL WITH SOD -- THE APPLICANT SHALL STABILIZE THE DISTURBED SOIL WITH PROPERLY INSTALLED SOD BY SEPTEMBER 15. 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 GROWTH INTO THE DISTURBED SOIL.

STABILIZE THE SOIL WITH MULCH -- BY NOVEMBER 15 THE APPLICANT SHALL 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 SHALL 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.

1.8 MAINTENANCE OF FACILITIES

THE STORMWATER FACILITIES WILL BE MAINTAINED BY THE APPLICANT, MAINEDOT OR THEIR ASSIGNED HEIRS. THE CONTRACT DOCUMENTS WILL REQUIRE THE CONTRACTOR TO DESIGNATE A PERSON RESPONSIBLE FOR MAINTENANCE OF THE SEDIMENTATION CONTROL FEATURES DURING CONSTRUCTION AS REQUIRED BY THE EROSION CONTROL REPORT. LONG-TERM OPERATION/MAINTENANCE RECOMMENDED FOR THE STORMWATER FACILITIES IS PRESENTED BELOW.

THE RESPONSIBLE PARTY MAY CONTRACT WITH SUCH PROFESSIONALS, AS MAY BE NECESSARY IN ORDER TO COMPLY WITH THIS PROVISION AND MAY RELY ON THE ADVICE OF SUCH PROFESSIONALS IN CARRYING OUT ITS DUTY HEREUNDER, PROVIDED, THAT THE FOLLOWING OPERATION AND MAINTENANCE PROCEDURES ARE HEREBY ESTABLISHED AS A MINIMUM FOR COMPLIANCE WITH THIS SECTION. A MAINTENANCE LOG OF THE INSPECTIONS SHALL BE KEPT BY THE RESPONSIBLE PARTY.

INSPECTION AND MAINTENANCE FREQUENCY AND CORRECTIVE MEASURES:
THE FOLLOWING AREAS, FACILITIES, AND MEASURES WILL BE INSPECTED AND THE IDENTIFIED DEFICIENCIES WILL BE CORRECTED. CLEAN-OUT MUST INCLUDE THE REMOVAL AND LEGAL DISPOSAL OF ANY ACCUMULATED SEDIMENTS AND DEBRIS.

CATCH BASINS:
INSPECT CATCH BASINS 2 TIMES PER YEAR (PREFERABLY IN SPRING AND FALL) TO ENSURE THAT THE CATCH BASINS ARE WORKING IN THEIR INTENDED FASHION AND THAT THEY ARE FREE OF DEBRIS. CLEAN STRUCTURES WHEN SEDIMENT DEPTHS REACH 12" FROM INVERT OF OUTLET. IF THE BASIN OUTLET IS DESIGNED WITH A HOOD TO TRAP FLOATABLE MATERIALS (I.E. SNOUT), CHECK TO ENSURE WATERTIGHT SEAL IS WORKING. AT A MINIMUM, REMOVE FLOATING DEBRIS AND HYDROCARBONS AT THE TIME OF THE INSPECTION.

CULVERTS:
INSPECT CULVERTS 2 TIMES PER YEAR (PREFERABLY IN SPRING AND FALL) TO ENSURE THAT THE CULVERTS ARE WORKING IN THEIR INTENDED FASHION AND THAT THEY ARE FREE OF DEBRIS. REMOVE ANY OBSTRUCTIONS TO FLOW; REMOVE ACCUMULATED SEDIMENTS AND DEBRIS AT THE INLET, AT THE OUTLET, AND WITHIN THE CONDUIT AND REPAIR ANY EROSION DAMAGE AT THE CULVERT'S INLET AND OUTLET.

INLET/OUTLET CONTROL STRUCTURES:
INSPECT STRUCTURES AND PIPING 2 TIMES PER YEAR (PREFERABLY IN SPRING AND FALL) TO ENSURE THAT THE STRUCTURES ARE WORKING IN THEIR INTENDED FASHION AND THAT THEY ARE FREE OF DEBRIS. REMOVE ANY OBSTRUCTIONS TO FLOW; REMOVE ACCUMULATED SEDIMENTS AND DEBRIS WITHIN THE STRUCTURE.

STORMDRAIN OUTLETS:
INSPECT OUTLETS 2 TIMES PER YEAR (PREFERABLY IN SPRING AND FALL) TO ENSURE THAT THE OUTLETS ARE WORKING IN THEIR INTENDED FASHION AND THAT THEY ARE FREE OF DEBRIS. REMOVE ANY OBSTRUCTIONS TO FLOW; REMOVE ACCUMULATED SEDIMENTS AND DEBRIS AT THE OUTLET AND WITHIN THE CONDUIT REPAIR ANY EROSION DAMAGE AT THE STORMDRAIN OUTLET.

WET POND:
INSPECT POND 2 TIMES PER YEAR (PREFERABLY IN SPRING AND FALL) TO ENSURE THAT IT IS WORKING IN ITS INTENDED FASHION AND THAT IT IS FREE OF TRASH AND DEBRIS. REMOVE AND PROPERLY DISPOSE OF ANY ACCUMULATED SEDIMENT OR DEBRIS AS NEEDED. INSPECT THE EMBANKMENTS AND SPILLWAYS FOR SETTLEMENT, SLOPE EROSION, AND DOWNSTREAM SWAMPING. MOW THE EMBANKMENT AND/OR VEGETATED SPILLWAY AS NEEDED TO CONTROL WOODY VEGETATION. INSPECT UNDERDRAINED GRAVEL TRENCH TO ENSURE IT IS IN GOOD WORKING ORDER AND THAT THE CHANNEL PROTECTION VOLUME DRAINS IN APPROXIMATELY 24 HOURS. REPLACE THE TOP SEVERAL INCHES OF THE GRAVEL IF THE CHANNEL PROTECTION VOLUME CANNOT DRAIN WITHIN 72 HOURS. THE FACILITIES SHALL BE INSPECTED AFTER MAJOR STORMS AND ANY IDENTIFIED DEFICIENCIES SHALL BE CORRECTED.

SOIL FILTER – BIO-FILTRATION:
INSPECT ALL UPSTREAM PRE-TREATMENT MEASURES 2 TIMES PER YEAR (PREFERABLY IN SPRING AND FALL) FOR SEDIMENT AND FLOATABLES ACCUMULATION. REMOVE AND DISPOSE OF ANY SEDIMENTS OR DEBRIS.

SURFACE (UNDERDRAIN POND, SWALE OR BIO-FILTER):
THE SOIL FILTER WILL BE INSPECTED WITHIN THE FIRST THREE MONTHS AFTER CONSTRUCTION; THEREAFTER THE FILTER WILL BE INSPECTED 2 TIMES PER YEAR (PREFERABLY IN SPRING AND FALL) TO ENSURE THAT THE FILTER IS DRAINING WITHIN 24 TO 48 HOURS OF A RAIN EVENT EQUIVALENT TO 1" OR MORE. ADJUSTMENTS WILL BE MADE TO THE OUTLET VALVE TO ENSURE THAT THE BIORETENTION CELL DRAINS WITHIN 24 TO 48 HOURS. FAILURE TO DRAIN IN 72 HOURS WILL REQUIRE PART OR ALL OF THE SOIL FILTER MEDIA TO BE REMOVED AND REPLACED WITH NEW MATERIAL MEETING THE SOIL FILTER GRADATION. THE FACILITIES WILL BE INSPECTED AFTER MAJOR STORMS AND ANY IDENTIFIED DEFICIENCIES WILL BE CORRECTED. HARVESTING AND WEEDING OF EXCESSIVE GROWTH SHALL BE PERFORMED AS NEEDED. INSPECT FOR UNWANTED OR INVASIVE PLANTS AND REMOVE AS NECESSARY.

STONE BERMED LEVEL LIP SPREADERS:
INSPECT 2 TIMES PER YEAR (PREFERABLY IN SPRING AND FALL) TO ENSURE THAT THEY ARE FREE OF DEBRIS AND NO UNDESIRABLE GROWTH IS IMPEDING WATER FLOW THROUGH THE BERM. IN ADDITION, THE STONE BERMED LEVEL LIP SPREADERS SHALL BE INSPECTED TO ENSURE THAT RUNOFF IS NOT BYPASSING THE BERMED SPREADER.

VEGETATED AREAS:
INSPECT SLOPES AND EMBANKMENTS EARLY IN THE GROWING SEASON TO IDENTIFY ACTIVE OR POTENTIAL EROSION PROBLEMS. REPLANT BARE AREAS OR AREAS WITH SPARSE GROWTH. WHERE RILL EROSION IS EVIDENT, ARMOR THE AREA WITH AN APPROPRIATE LINING OR DIVERT THE EROSIVE FLOWS TO ON-SITE AREAS ABLE TO WITHSTAND THE CONCENTRATED FLOWS. THE FACILITIES WILL BE INSPECTED AFTER MAJOR STORMS AND ANY IDENTIFIED DEFICIENCIES WILL BE CORRECTED.

DITCHES, SWALES AND OTHER OPEN STORMWATER CHANNELS:
INSPECT 2 TIMES PER YEAR (PREFERABLY IN SPRING AND FALL) TO ENSURE THEY ARE WORKING IN THEIR INTENDED FASHION AND THAT THEY ARE FREE OF SEDIMENT AND DEBRIS. REMOVE ANY OBSTRUCTIONS TO FLOW, INCLUDING ACCUMULATED SEDIMENTS AND DEBRIS AND VEGETATED GROWTH. REPAIR ANY EROSION OF THE DITCH LINING. VEGETATED DITCHES WILL BE MOWED AT LEAST ANNUALLY OR OTHERWISE MAINTAINED TO CONTROL THE GROWTH OF WOODY VEGETATION AND MAINTAIN FLOW CAPACITY. ANY WOODY VEGETATION GROWING THROUGH RIPRAP LININGS MUST ALSO BE REMOVED. REPAIR ANY SLUMPING SIDE SLOPES AS SOON AS PRACTICABLE. IF THE DITCH HAS A RIPRAP LINING, REPLACE RIPRAP ON AREAS WHERE ANY UNDERLYING FILTER FABRIC OR UNDERDRAIN GRAVEL IS SHOWING THROUGH THE STONE OR WHERE STONES HAVE DISLODGED. CORRECT ANY EROSION OF THE CHANNEL'S BOTTOM OR SIDESLOPES. THE FACILITIES SHALL BE INSPECTED AFTER MAJOR STORMS AND ANY IDENTIFIED DEFICIENCIES SHALL BE CORRECTED.

ROADWAYS AND PARKING SURFACES: CLEAR ACCUMULATIONS OF WINTER SAND IN PARKING LOTS AND ALONG ROADWAYS AT LEAST ONCE A YEAR, PREFERABLY IN THE SPRING. ACCUMULATIONS ON PAVEMENT MAY BE REMOVED BY PAVEMENT SWEEPING. ACCUMULATIONS OF SAND ALONG ROAD SHOULDERS MAY BE REMOVED BY GRADING EXCESS SAND TO THE PAVEMENT EDGE AND REMOVING IT MANUALLY OR BY A FRONT-END LOADER. REPAIR POTHOLES AND OTHER ROADWAY OBSTRUCTIONS AND HAZARDS. PLOWING AND SANDING OF PAVED AREAS SHALL BE PERFORMED AS NECESSARY TO MAINTAIN VEHICULAR TRAFFIC SAFETY.

Project: 66 Industrial Drive – Phase 1
Site Location: Augusta, ME

Temporary Seeding

1. Instruction on preparation of soil: Prepare a good seed bed for planting method used.
2. Apply lime as follows: _# / acres, OR 138 # /M Sq. Ft.
3. Fertilize with ____ pounds of ____ N-P-K/ac. OR 13.8 pounds of 10-10-10 N-P-K/M Sq. Ft.
4. Method of applying lime and fertilizer: Spread and work into the soil before seeding.
5. Seed with the following mixture:
   - 50% Winter Rye
   - 50% Annual Rye
6. Mulching instructions: Apply at the rate of ____per acre, OR 75 pounds per M. Sq. Ft.

	Amount	Unit # Tons, Etc.
7. TOTAL LIME	138	#/1000 sq. ft.
8. TOTAL FERTILIZER	13.8	#/1000 sq. ft.
9. TOTAL SEED	1.03	#/1000 sq. ft.
10. TOTAL MULCH	75	#/1000 sq. ft.
11. TOTAL other materials, seeds, etc.		
12. REMARKS		

Spring seeding is recommended; however, late summer (prior to September 1) seeding can be made. Permanent seeding should be made prior to August 5 or as a dormant seeding after the first killing frost and before the first snowfall. If seeding cannot be done within these seeding dates, temporary seeding and mulching shall be used to protect the site. Permanent seeding shall be delayed until the next recommended seeding period.

Project: 66 Industrial Drive – Phase 1
Site Location: Augusta, ME

Permanent Seeding

Instruction on preparation of soil: Prepare a good seed bed for planting method used.
1. Apply lime as follows: _# / acres, OR 138 # /M Sq. Ft.
2. Fertilize with ____ pounds of ____ N-P-K/ac. OR 18.4 pounds of 10-20-20 N-P-K/M Sq. Ft.
3. Method of applying lime and fertilizer: Spread and work into the soil before seeding.
4. Seed with the following mixture:
   - 40% Creeping Red Fescue
   - 30% Charger II Perennial Ryegrass
   - 20% KenBlue Kentucky Bluegrass
   - 10% Tiffany Chewings Fescue
5. Mulching instructions: Apply at the rate of ____per acre, OR 75 pounds per M. Sq. Ft.

	Amount	Unit # Tons, Etc.
6. TOTAL LIME	138	#/1000 sq. ft.
7. TOTAL FERTILIZER	18.4	#/1000 sq. ft.
8. TOTAL SEED	1.03	#/1000 sq. ft.
9. TOTAL MULCH	75	#/1000 sq. ft.
10. TOTAL other materials, seeds, etc.		
11. REMARKS		

Spring seeding is recommended, however, late summer (prior to September 1) seeding can be made. Permanent seeding should be made prior to August 5 or as a dormant seeding after the first killing frost and before the first snowfall. If seeding cannot be done within these seeding dates, temporary seeding and mulching shall be used to protect the site. Permanent seeding shall be delayed until the next recommended seeding period.

ISSUED FOR BID
FEBRUARY 5, 2014

Gorrill-Palmer Consulting Engineers, Inc.
Engineering Excellence Since 1998
PO Box 1237
15 Shaker Road
Gray, ME 04039
207-657-6910
FAX: 207-657-6912
E-Mail: mailbox@gorrillpalmer.com

Allied Engineering
Structural Mechanical Electrical Commissioning
160 Veranda Street
Portland, Maine 04103
207.221.2260
207.221.2266
www.allied-eng.com

Allied Project No: 13057 Cad File:

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

DATE	
COMMISSIONER:	
CHIEF ENGINEER:	

STATE OF MAINE – WILLIAM C. HASKELL – No. 8518 – 1/27/2014 – LICENSED – PROFESSIONAL ENGINEER

PROJECT INFORMATION		SIGNATURE	
PROGRAM			
PROJECT MANAGER		–	
DESIGNER	ALLIED ENG., INC.	ARCH. LIN. NUMBER	
CONSULTANT	GORRILL-PALMER		
PROJECT RESIDENT		DATE	FEBRUARY 5, 2014
CONTRACTOR			
PROJECT COMPLETION DATE	–		

PIN NO: 020118.00

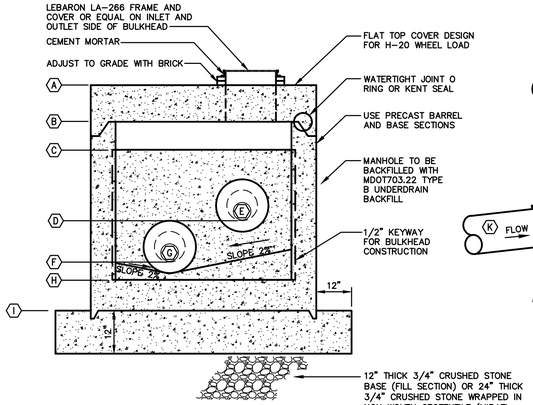
66 INDUSTRIAL DRIVE-PHASE 1
66 INDUSTRIAL DRIVE, AUGUSTA, MAINE
MAINE DEPARTMENT OF TRANSPORTATION

EROSION AND SEDIMENTATION CONTROL NOTES

COPYRIGHT 2014 ALLIED ENGINEERING, INC.

SHEET NUMBER
C504

U:\2798_Allied Engineering_MaineDOT Fleet Services\Z - CAD\dwg\2798-DETAILS.dwg Feb 04, 2014 - 9:03am

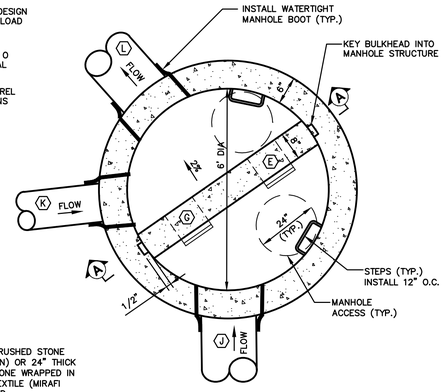


SECTION A–A

OUTLET CONTROL STRUCTURE 1 (OCS1)

SEE SCHEDULE A

NOT TO SCALE



PLAN VIEW

6' OUTLET CONTROL STRUCTURE 1 (OCS1)

SEE SCHEDULE A

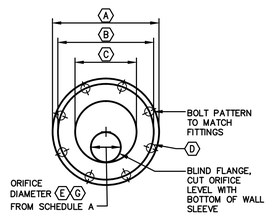
NOT TO SCALE

SCHEDULE A

	ITEM DESCRIPTION	DIMENSION/ ELEVATION OCS 1
A	TOP OF STRUCTURE	205.00
B	UNDERSIDE TOP SLAB	204.33
C	TOP CONCRETE BULKHEAD	203.63
D	ORIFICE INVERT	201.50
E	ORIFICE DIAMETER	8"
F	ORIFICE INVERT	200.35
G	ORIFICE DIAMETER	7.75"
H	MANHOLE INVERT	195.40
I	BOTTOM OF STRUCTURE	194.40
J	PIPE DIAMETER	24"
	INVERT IN	195.50
K	PIPE DIAMETER	6"
	INVERT IN	195.50
L	PIPE DIAMETER	24"
	INVERT OUT	195.40

SCHEDULE B ORIFICE

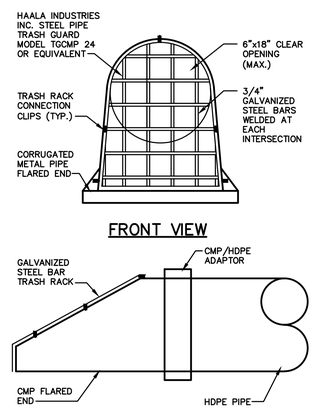
	ITEM DESCRIPTION	DIMENSION /ELEVATION OCS 1
A	FLANGE O.D.	19"
B	BOLT CIRCLE	17"
C	NOMINAL PIPE DIAMETER	12"
D	BOLT HOLE DIAMETER	1"
E	ECCENTRIC ORIFICE DIAMETER	8"
G	ECCENTRIC ORIFICE DIAMETER	7.75"



ORIFICE DETAIL 1

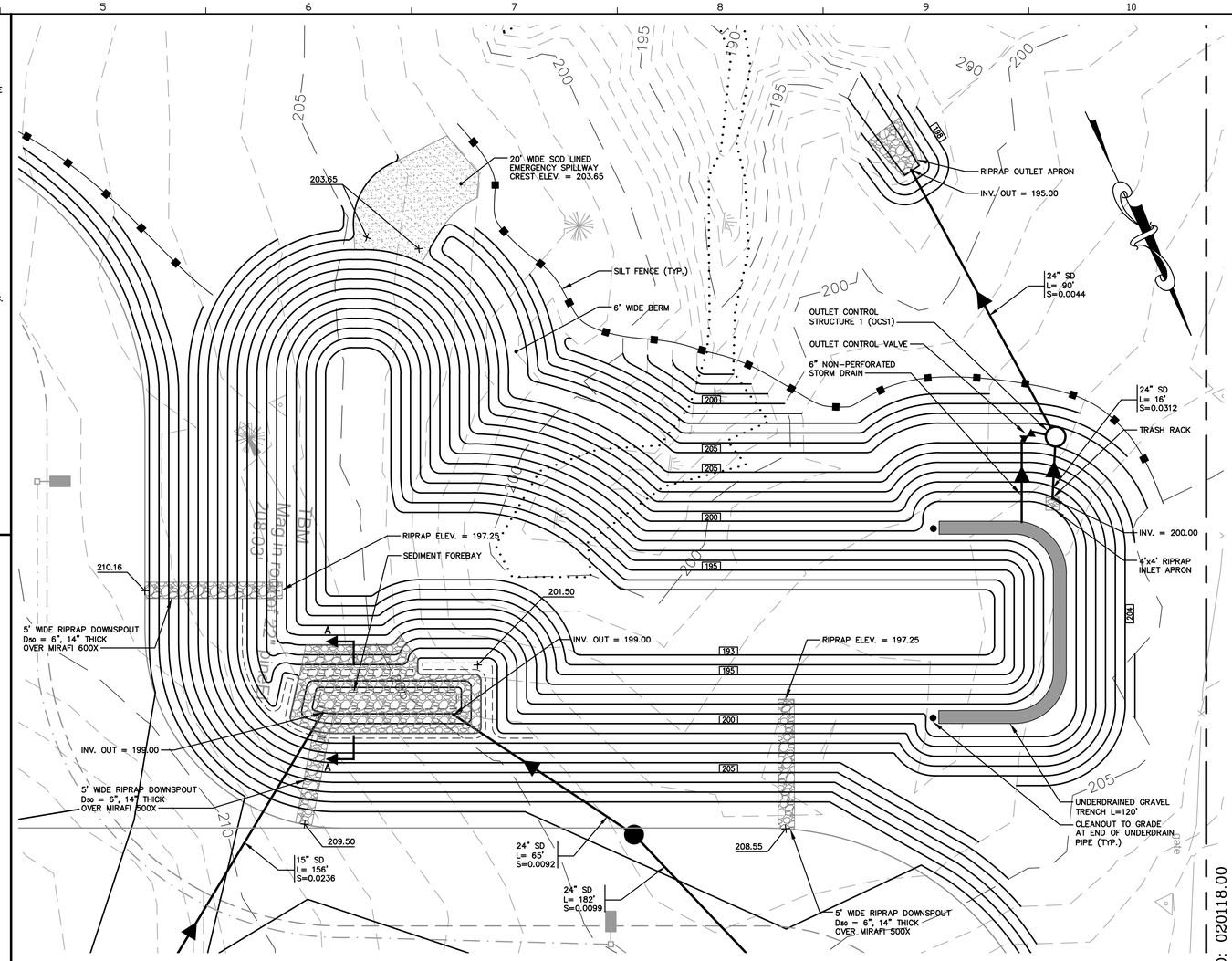
SEE SCHEDULE B

NOT TO SCALE



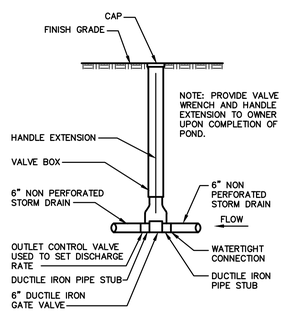
TRASH RACK

NOT TO SCALE



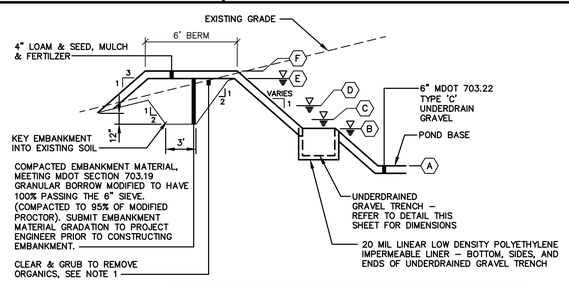
WET POND PROJECT DETAILS

1"=20'



OUTLET VALVE

NOT TO SCALE



NOTES:

1. EMBANKMENT FOOTPRINT SHALL BE CLEARED OF TRASH/DEBRIS AND ANY ROCKS GREATER THAN 6", BE FREE OF ANY STANDING WATER, BE GRADED TO BE NO STEEPER THAN 1H:1V, BE SCARIFIED PRIOR TO EMBANKMENT FILL PLACEMENT, AND BE INSPECTED AND APPROVED BY THE PROJECT ENGINEER BEFORE FILL PLACEMENT BEGINS.

SCHEDULE B EMBANKMENT SCHEDULE

ITEM DESCRIPTION	DIMENSION/ELEVATION
(A) POND BASE ELEVATION	193.00
(B) PERMANENT POOL ELEVATION	198.29
(C) PEAK ELEVATION – CHANNEL PROTECTION VOLUME	200.35
(D) PEAK ELEVATION – 2 YEAR STORM	201.47
(E) PEAK ELEVATION – 25 YEAR STORM	203.63
(F) TOP OF BERM	205.00

TYPICAL WET POND CROSS SECTION

NOT TO SCALE

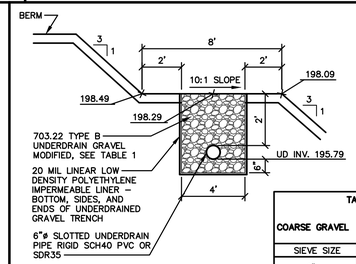


TABLE 1

COARSE GRAVEL	(MDOT 703.22 TYPE B UNDERDRAIN GRAVEL MODIFED)
SIEVE SIZE	% PASSING BY WEIGHT
1"	90–100
1/2"	75–100
#4	50–100
#20	15–80
#50	10–15
#200	0–5

UNDERDRAINED GRAVEL TRENCH

NOT TO SCALE

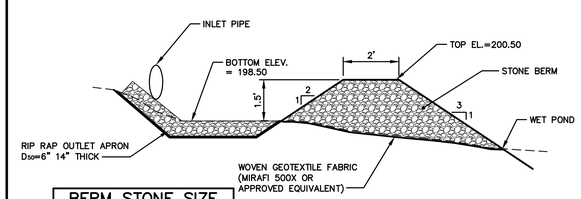
MDEP REQUIRED

CONSTRUCTION OVERSIGHT

THE APPLICANT WILL RETAIN THE SERVICES OF A PROFESSIONAL ENGINEER TO INSPECT THE CONSTRUCTION AND STABILIZATION OF ALL STORMWATER MANAGEMENT STRUCTURES. IF NECESSARY, THE INSPECTING ENGINEER WILL INTERPRET THE POND'S CONSTRUCTION PLAN FOR THE CONTRACTOR. ONCE ALL STORMWATER MANAGEMENT STRUCTURES ARE CONSTRUCTED AND STABILIZED, THE INSPECTING ENGINEER WILL NOTIFY THE DEPARTMENT IN WRITING WITHIN 30 DAYS TO STATE THAT THE POND HAS BEEN COMPLETED. ACCOMPANYING THE ENGINEER'S NOTIFICATION MUST BE A LOG OF THE ENGINEER'S INSPECTIONS GIVING THE DATE OF EACH INSPECTION, THE TIME OF EACH INSPECTION, AND THE ITEMS INSPECTED ON EACH VISIT, AND INCLUDE ANY TESTING DATA OR SIEVE ANALYSIS DATA OF EVERY MINERAL SOIL AND SOIL MEDIA SPECIFIED IN THE PLANS AND USED ON SITE.

WETPONDS

INSPECTION BY A PROFESSIONAL ENGINEER WILL CONSIST OF WEEKLY VISITS TO THE SITE TO INSPECT THE INSTALLATION OF EACH POND'S EMBANKMENT CONSTRUCTION, STORMWATER INLET, UNDERDRAINED GRAVEL OUTLET, GRAVEL OUTLET FILTER MATERIAL MAKEUP AND PLACEMENT, OUTLET CONTROL STRUCTURE, CLAY LINER (IF APPLICABLE), AND EMERGENCY SPILLWAY CONSTRUCTION FROM INITIAL GROUND DISTURBANCE TO FINAL STABILIZATION OF THE POND. AN INSPECTION OF THE UNDERDRAINED GRAVEL OUTLET SHALL ALSO BE PERFORMED ONE YEAR AFTER THE FINAL STABILIZATION OF THE POND.



BERM STONE SIZE

SIEVE DESIGNATION (US CUSTOMARY)	PERCENT BY WEIGHT PASSING
12 IN	100
6 IN	84–100
3 IN	68–83
1 IN	42–55
NO. 4	8–12

SEDIMENT FOREBAY SECTION A–A

NOT TO SCALE

ISSUED FOR BID

FEBRUARY 5, 2014

Gorrill-Palmer Consulting Engineers, Inc.
PO Box 1237 Engineering Excellence Since 1998 207-657-6910
15 Shaker Road FAX: 207-657-6912
Gray, ME 04039 E-Mail: mailbox@gorrillpalmer.com

Allied Engineering
Structural Mechanical Electrical Commissioning
160 Veranda Street
Portland, Maine 04103
207.221.2260
207.221.2266
www.allied-eng.com

Allied Project No: 13057 Cad File:

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

DATE

COMMISSIONER:

CHIEF ENGINEER:

STATE OF MAINE
WILLIAM C. HASKELL
No. 8518
12/7/2013
LICENSED
PROFESSIONAL ENGINEER

PROJECT INFORMATION	SIGNATURE
PROGRAM	–
PROJECT MANAGER	ARCH. LIN. NUMBER
DESIGNER	ALLIED ENG., INC.
CONSULTANT	GORRILL-PALMER
PROJECT RESIDENT	DATE FEBRUARY 5, 2014
CONTRACTOR	–
PROJECT COMPLETION DATE	–

PIN NO: 020118.00

66 INDUSTRIAL DRIVE–PHASE 1

66 INDUSTRIAL DRIVE, AUGUSTA, MAINE

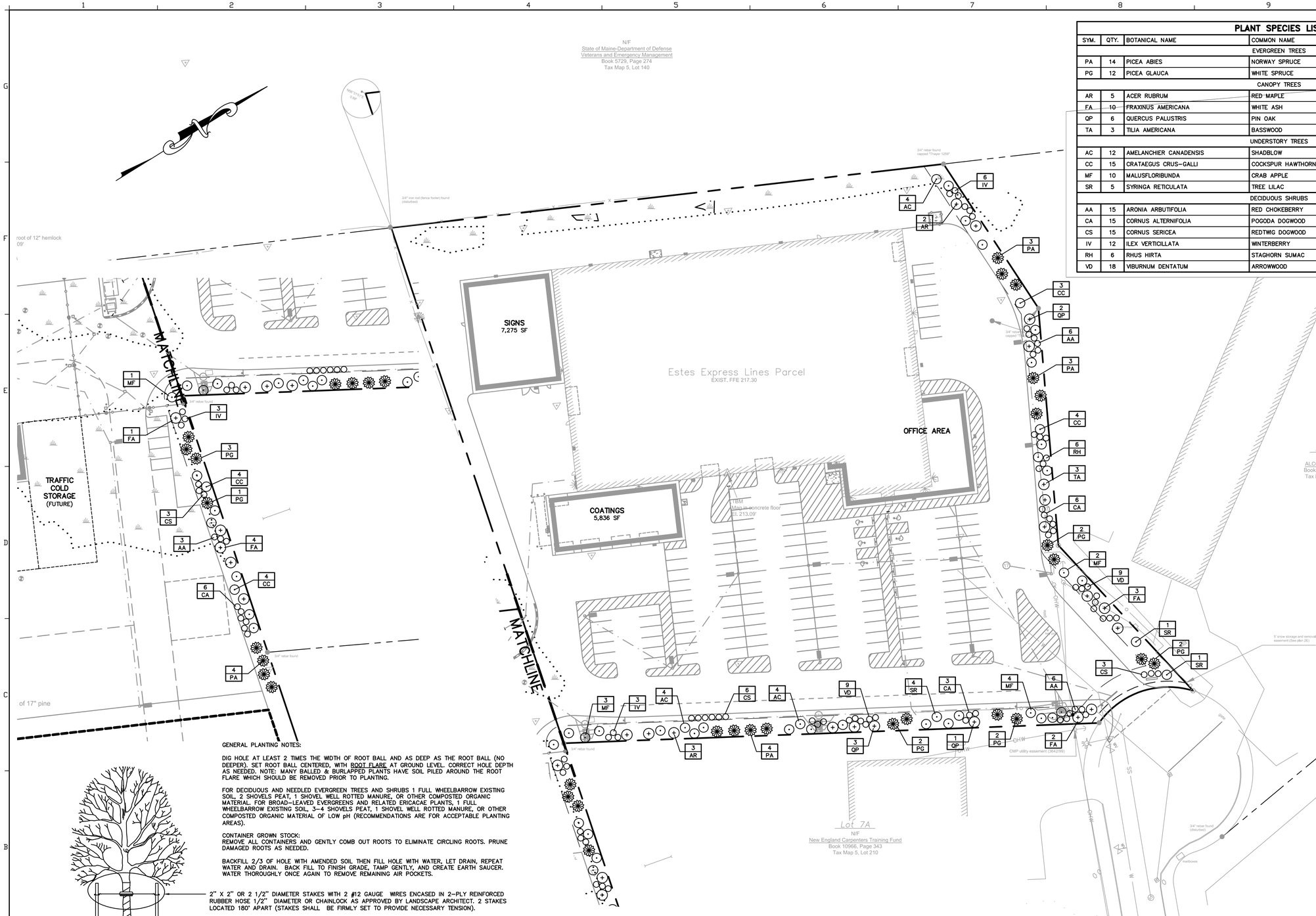
MAINE DEPARTMENT OF TRANSPORTATION

WET POND PLAN AND DETAILS

SHEET NUMBER

C505

U:\2798_Allied Engineering_MaineDOT Fleet Services\Z - CAD\dwg\2798-DETAIL-PONDS.dwg Feb 04, 2014 - 9:04am



PLANT SPECIES LIST

SYM.	QTY.	BOTANICAL NAME	COMMON NAME	SIZE	REMARKS
			EVERGREEN TREES		
PA	14	PICEA ABIES	NORWAY SPRUCE	5'–6'	B&B
PG	12	PICEA GLAUCA	WHITE SPRUCE	5'–6'	B&B
			CANOPY TREES		
AR	5	ACER RUBRUM	RED MAPLE	2"–2 1/2" CAL.	B&B
FA	10	FRAXINUS AMERICANA	WHITE ASH	2"–2 1/2" CAL.	B&B
QP	6	QUERCUS PALUSTRIS	PIN OAK	2"–2 1/2" CAL.	B&B
TA	3	TILIA AMERICANA	BASSWOOD	2"–2 1/2" CAL.	B&B
			UNDERSTORY TREES		
AC	12	AMELANCHIER CANADENSIS	SHADBLOW	1 3/4"–2" CAL.	B&B
CC	15	CRATAEGUS CRUS–GALLI	COCKSPUR HAWTHORN	1 3/4"–2" CAL	B&B
MF	10	MALUSFLORIBUNDA	CRAB APPLE	1 3/4"–2" CAL.	B&B
SR	5	SYRINGA RETICULATA	TREE LILAC	1 3/4"–2" CAL.	B&B
			DECIDUOUS SHRUBS		
AA	15	ARONIA ARBUTIFOLIA	RED CHOKEBERRY	24"	CONT.
CA	15	CORNUS ALTERNIFOLIA	POGODA DOGWOOD	24"	CONT.
CS	15	CORNUS SERICEA	REDTWIG DOGWOOD	24"	CONT.
IV	12	ILEX VERTICILLATA	WINTERBERRY	24"	CONT.
RH	6	RHUS HIRTA	STAGHORN SUMAC	24"	CONT.
VD	18	VIBURNUM DENTATUM	ARROWWOOD	24"	CONT.

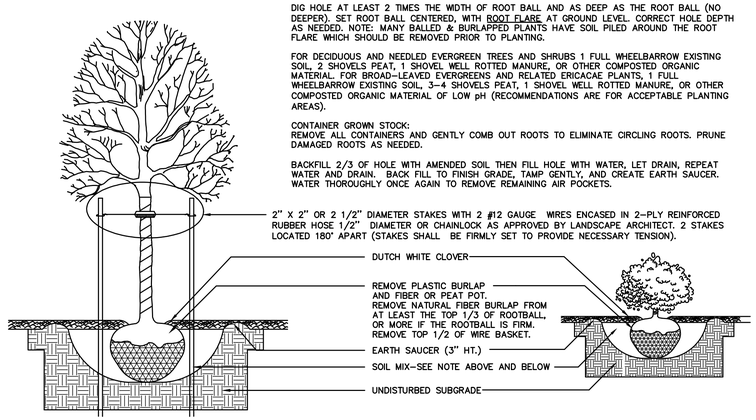
GENERAL PLANTING NOTES:

DIG HOLE AT LEAST 2 TIMES THE WIDTH OF ROOT BALL AND AS DEEP AS THE ROOT BALL (NO DEEPER). SET ROOT BALL CENTERED, WITH ROOT FLARE AT GROUND LEVEL. CORRECT HOLE DEPTH AS NEEDED. NOTE: MANY BALLED & BURLAPPED PLANTS HAVE SOIL PILED AROUND THE ROOT FLARE WHICH SHOULD BE REMOVED PRIOR TO PLANTING.

FOR DECIDUOUS AND NEEDLED EVERGREEN TREES AND SHRUBS 1 FULL WHEELBARROW EXISTING SOIL, 2 SHOVELS PEAT, 1 SHOVEL WELL ROTTED MANURE, OR OTHER COMPOSTED ORGANIC MATERIAL. FOR BROAD–LEAVED EVERGREENS AND RELATED ERICACAE PLANTS, 1 FULL WHEELBARROW EXISTING SOIL, 3–4 SHOVELS PEAT, 1 SHOVEL WELL ROTTED MANURE, OR OTHER COMPOSTED ORGANIC MATERIAL OF LOW pH (RECOMMENDATIONS ARE FOR ACCEPTABLE PLANTING AREAS).

CONTAINER GROWN STOCK:
REMOVE ALL CONTAINERS AND GENTLY COMB OUT ROOTS TO ELIMINATE CIRCLING ROOTS. PRUNE DAMAGED ROOTS AS NEEDED.

BACKFILL 2/3 OF HOLE WITH AMENDED SOIL THEN FILL HOLE WITH WATER, LET DRAIN, REPEAT WATER AND DRAIN. BACK FILL TO FINISH GRADE, TAMP GENTLY, AND CREATE EARTH SAUCER. WATER THOROUGHLY ONCE AGAIN TO REMOVE REMAINING AIR POCKETS.



TREE AND SHRUB PLANTING DETAIL

NOT TO SCALE

ISSUED FOR BID
FEBRUARY 5, 2014

Gorrill–Palmer Consulting Engineers, Inc.
PO Box 1237 *Engineering Excellence Since 1998* 207–657–6910
15 Shaker Road FAX: 207–657–6912
Gray, ME 04039 E–Mail: mailbox@gorrillpalmer.com

Allied Engineering
Structural Mechanical Electrical Commissioning
160 Veranda Street
Portland, Maine 04103
207.221.2260
207.221.2266
www.allied-eng.com

Allied Project No: 13057 Cad File:

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

DATE

COMMISSIONER:

CHIEF ENGINEER:

STATE OF MAINE
WILLIAM C. HASKELL
No. 8518
LICENSED
PROFESSIONAL ENGINEER
12/4/2013

PROJECT INFORMATION	
PROGRAM	SIGNATURE
PROJECT MANAGER	–
DESIGNER	ALLIED ENG., INC.
CONSULTANT	GORRILL–PALMER
PROJECT RESIDENT	ARCH. LIN. NUMBER
CONTRACTOR	DATE FEBRUARY 5, 2014
PROJECT COMPLETION DATE	–

PIN NO: 020118.00

66 INDUSTRIAL DRIVE–PHASE 1

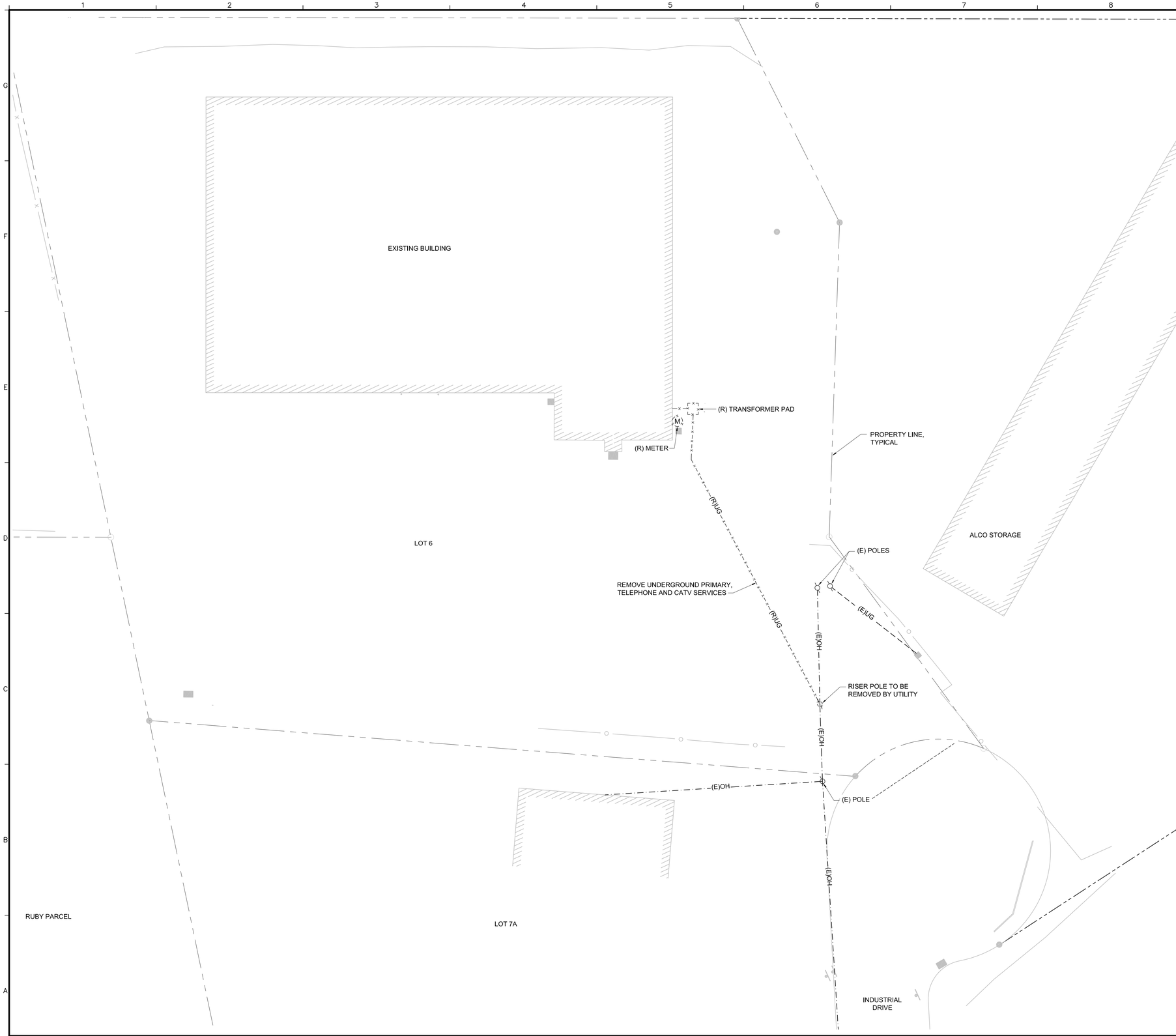
66 INDUSTRIAL DRIVE, AUGUSTA, MAINE
MAINE DEPARTMENT OF TRANSPORTATION

LANDSCAPE PLAN

SHEET NUMBER

L101

U:\2798_Allied Engineering_MaineDOT Fleet Services\Z – CAD\dwg\2798–LANDSCAPE.dwg Feb 04, 2014 – 9:04am



A1 | ELECTRICAL SITE DEMOLITION

1"=30'-0"

OH	OVERHEAD WIRING
UG	UNDERGROUND OR UNDERSLAB WIRING
X	ITEM TO BE DEMOLISHED
	UTILITY POLE
	FUSED DISCONNECT SWITCH
	NON-FUSED DISCONNECT SWITCH
	GROUNDING SYSTEM
J	JUNCTION BOX, WALL MOUNTED
J	JUNCTION BOX, IN-GROUND
MH	ELECTRICAL MANHOLE, PER UTILITY COMPANY STANDARDS, COORDINATE LOCATION WITH OTHER UNDERGROUND UTILITIES
XFMR	TRANSFORMER, PROVIDE TRANSFORMER VAULT PER UTILITY SPECIFICATIONS
PB	PULL BOX, 17" x 30" OR LARGER AS REQUIRED BY CODE OR APPLICABLE UTILITY COMPANY
	SINGLE POLE MOUNTED LIGHT, TERMINATE CONDUITS AT CONCRETE BASE PROVIDED BY DIVISION 33
	SINGLE POLE HOMERUN, CONNECT TO PANEL INDICATED
	SINGLE-PHASE HOMERUN OR MULTIPLE HOMERUN UTILIZING THE SAME CONDUIT, CONNECT TO PANEL INDICATED
	3-PHASE HOMERUN OR MULTIPLE HOMERUNS UTILIZING THE SAME CONDUIT, CONNECT TO PANEL INDICATED
A1 / ES100	SECTION CALL-OUT
	CONDUITS WITH CONCRETE ENCASEMENT
(E)	EXISTING TO REMAIN
(R)	ITEM TO BE REMOVED

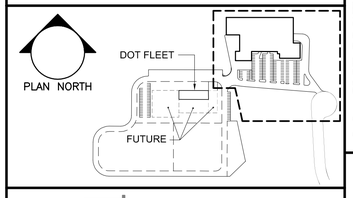
D9 | ELECTRICAL SITE LEGEND

NO SCALE

ISSUED FOR BID

FEBRUARY 5, 2014

PROJECT KEY PLAN



Allied Engineering
Structural Mechanical Electrical Commissioning
160 Veranda Street
Portland, Maine 04103
207.221.2260
207.221.2266
www.allied-eng.com

Allied Project No: 13057 Cad File: 13057_ES.DWG

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

DATE

COMMISSIONER:

CHIEF ENGINEER:

STATE OF MAINE
CATHERINE A. FAUCHER
No. 7507
LICENSED
PROFESSIONAL ENGINEER

SIGNATURE –

ARCH. LIN. NUMBER

DATE FEBRUARY 5, 2014

PROJECT INFORMATION	
PROGRAM	
PROJECT MANAGER	
DESIGNER	ALLIED ENG., INC.
CONSULTANT	–
PROJECT RESIDENT	
CONTRACTOR	
PROJECT COMPLETION DATE	–

PIN NO: 020118.00

66 INDUSTRIAL DRIVE–PHASE 1

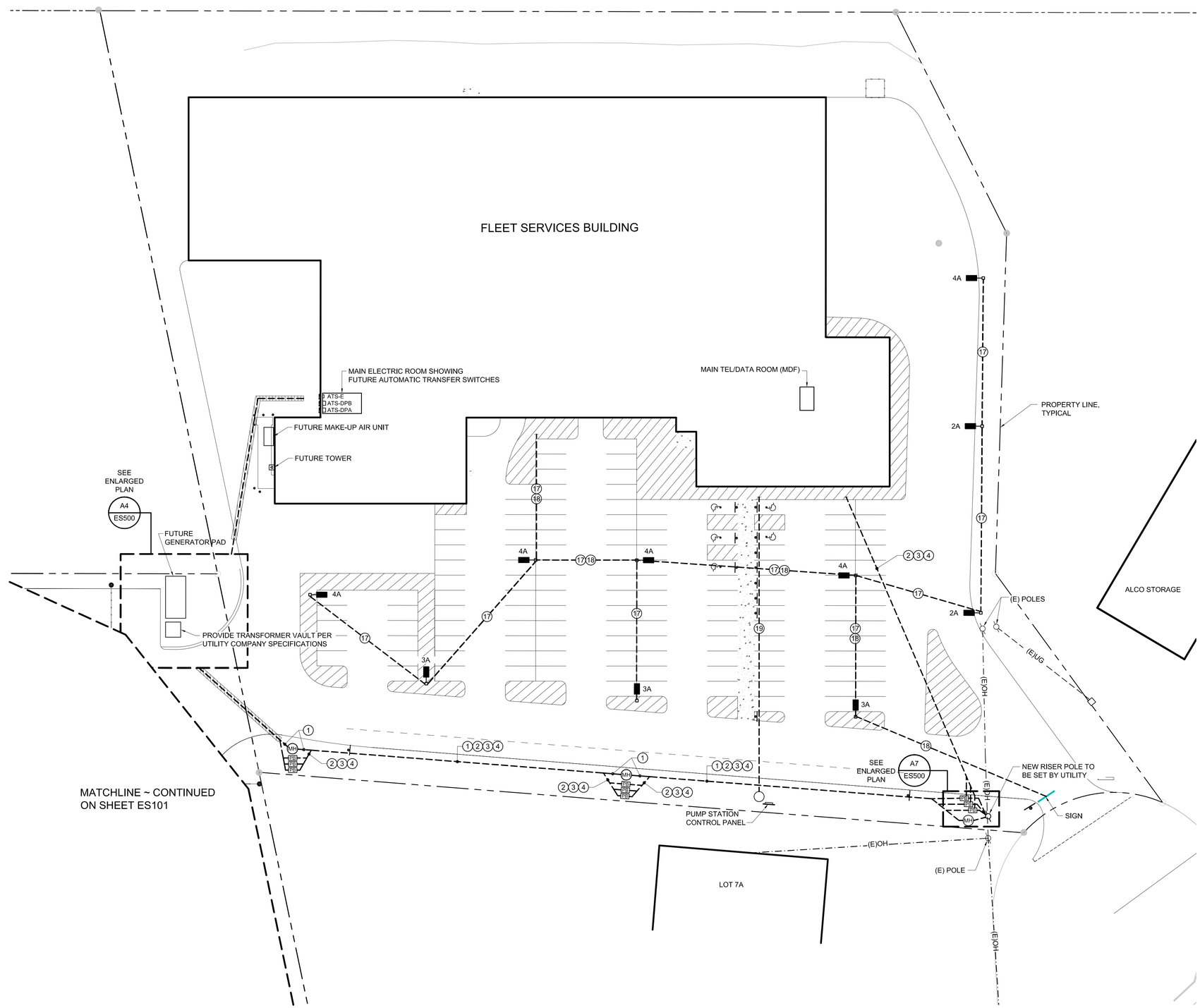
66 INDUSTRIAL DRIVE, AUGUSTA, MAINE
MAINE DEPARTMENT OF TRANSPORTATION

ELECTRICAL SITE DEMOLITION PLAN

SHEET NUMBER

ESD100

N:\Projects\2013\13057 ~ BGS_MDOT Fleet Services Building\00 Drawing Files\13057_ES.dwg Feb 04, 2014 – 2:16pm



1. (2) 5" C, PRIMARY
2. (1) 5" C, TELEPHONE
3. (1) 5" C, CATV
4. (1) 5" C SPARE
5. (1) 2" C, NORMAL POWER FOR FUTURE CONNECTION TO ATS-E
6. (2) 4" C, NORMAL POWER FOR FUTURE CONNECTION TO ATS-DP1
7. (2) 4" C, NORMAL POWER FOR FUTURE CONNECTION TO ATS-DP2
8. (1) 1" C FOR METER CONNECTION
9. (1) 2" C, GENERATOR POWER FOR FUTURE CONNECTION TO DISCONNECT SWITCH FOR ATS-E
10. (2) 4" C, GENERATOR POWER FOR FUTURE CONNECTION TO DISCONNECT SWITCH FOR ATS-DP1
11. (2) 4" C, GENERATOR POWER FOR FUTURE CONNECTION TO DISCONNECT SWITCH FOR ATS-DP2
12. (1) 1" C FOR FOR FUTURE CONNECTIONS OF JACKET WATER HEATER and BATTERY CHARGER CIRCUITS
13. (1) 1" C FOR CONTROL WIRING FOR FUTURE CONNECTION TO ATS-E, ATS-DP1 and ATS-DP2
14. (1) 1" C FOR DATA FOR FUTURE CONNECTION TO GENERATOR ANNUNCIATOR PANEL
15. (1) 1" C SPARE
16. (2) 4" C, NORMAL POWER FOR FUTURE CONNECTION TO STORAGE BUILDING
17. (1) 1" C FOR FUTURE CONNECTION OF SITE LIGHTING POWER
18. (1) 1" C FOR SIGN POWER, and (1) 1" C FOR SIGN DATA FOR FUTURE CONNECTIONS
19. (1) 1" C FOR PUMP STATION POWER, and (1) 2" C FOR PUMP STATION DATA FOR FUTURE CONNECTIONS
20. (1) 1" C FOR GATE POWER, and (1) 2" C FOR GATE DATA FOR FUTURE CONNECTIONS
21. (2) 1" C FOR FUEL ISLAND POWER , and (2) 2" C FOR FUEL ISLAND COMMUNICATIONS FOR FUTURE CONNECTION
22. (2) 1" C FOR FUEL ISLAND EMERGENCY POWER SHUTOFF FUTURE CONNECTIONS

D9	CONDUIT AND WIRING KEY

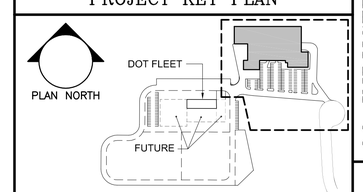
NOTE:

TERMINATE CONDUITS 10' FROM BUILDINGS FOR FUTURE EXTENSION ~ CAP ENDS AND STAKE LOCATION TO FACILITATE IDENTIFICATION

ISSUED FOR BID

FEBRUARY 5, 2014

PROJECT KEY PLAN



Allied Engineering
Structural Mechanical Electrical Commissioning
160 Veranda Street
Portland, Maine 04103
207.221.2260
207.221.2366
www.allied-eng.com

Allied Project No: 13057 Cad File: 13057_ES.DWG

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

	DATE
COMMISSIONER:	
CHIEF ENGINEER:	

STATE OF MAINE
CATHERINE A. FAUCHER
No. 7501
LICENSED
PROFESSIONAL ENGINEER

INFORMATION	
SIGNATURE	–
ARCH. LIN. NUMBER	–
DATE	FEBRUARY 5, 2014

PROJECT	
PROGRAM	
PROJECT MANAGER	
DESIGNER	ALLIED ENG., INC.
CONSULTANT	–
PROJECT RESIDENT	
CONTRACTOR	
PROJECT COMPLETION DATE	–

PIN NO: 020118.00

66 INDUSTRIAL DRIVE–PHASE 1
66 INDUSTRIAL DRIVE, AUGUSTA, MAINE
MAINE DEPARTMENT OF TRANSPORTATION

ELECTRICAL
SITE PLAN ~ PART 1

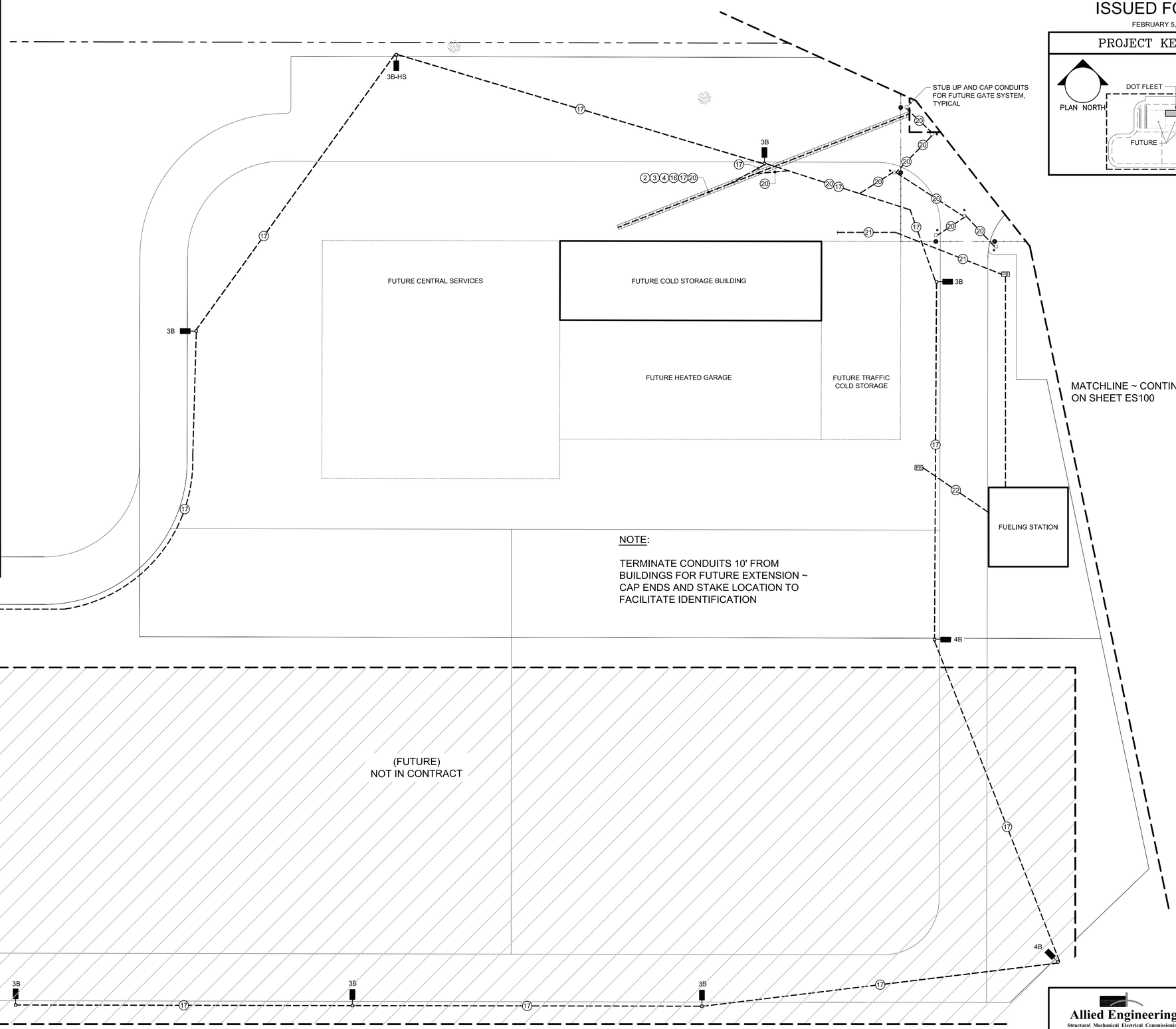
SHEET NUMBER
ES100

A1	ELECTRICAL SITE PLAN ~ PART 1
1"=30'-0"	

N:\Projects\2013\13057 ~ BGS_MDOT Fleet Services Building\00 Drawing Files\13057_ES.dwg Feb 04, 2014 – 2:16pm

1. (2) 5" C, PRIMARY
2. (1) 5" C, TELEPHONE
3. (1) 5" C, CATV
4. (1) 5" C SPARE
5. (1) 2" C, NORMAL POWER FOR FUTURE CONNECTION TO ATS-E
6. (2) 4" C, NORMAL POWER FOR FUTURE CONNECTION TO ATS-DP1
7. (2) 4" C, NORMAL POWER FOR FUTURE CONNECTION TO ATS-DP2
8. (1) 1" C FOR METER CONNECTION
9. (1) 2" C, GENERATOR POWER FOR FUTURE CONNECTION TO DISCONNECT SWITCH FOR ATS-E
10. (2) 4" C, GENERATOR POWER FOR FUTURE CONNECTION TO DISCONNECT SWITCH FOR ATS-DP1
11. (2) 4" C, GENERATOR POWER FOR FUTURE CONNECTION TO DISCONNECT SWITCH FOR ATS-DP2
12. (1) 1" C FOR FOR FUTURE CONNECTIONS OF JACKET WATER HEATER and BATTERY CHARGER CIRCUITS
13. (1) 1" C FOR CONTROL WIRING FOR FUTURE CONNECTION TO ATS-E, ATS-DP1 and ATS-DP2
14. (1) 1" C FOR DATA FOR FUTURE CONNECTION TO GENERATOR ANNUNCIATOR PANEL
15. (1) 1" C SPARE
16. (2) 4" C, NORMAL POWER FOR FUTURE CONNECTION TO STORAGE BUILDING
17. (1) 1" C FOR FUTURE CONNECTION OF SITE LIGHTING POWER
18. (1) 1" C FOR SIGN POWER, and (1) 1" C FOR SIGN DATA FOR FUTURE CONNECTIONS
19. (1) 1" C FOR PUMP STATION POWER, and (1) 2" C FOR PUMP STATION DATA FOR FUTURE CONNECTIONS
20. (1) 1" C FOR GATE POWER, and (1) 2" C FOR GATE DATA FOR FUTURE CONNECTIONS
21. (2) 1" C FOR FUEL ISLAND POWER , and (2) 2" C FOR FUEL ISLAND COMMUNICATIONS FOR FUTURE CONNECTION
22. (2) 1" C FOR FUEL ISLAND EMERGENCY POWER SHUTOFF FUTURE CONNECTIONS

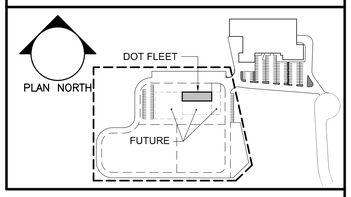
D1	CONDUIT AND WIRING KEY



A1	ELECTRICAL SITE PLAN ~ PART 2
1"=30'-0"	

ISSUED FOR BID
FEBRUARY 5, 2014

PROJECT KEY PLAN



STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

DATE
COMMISIONER:
CHIEF ENGINEER:

STATE OF MAINE
CATHERINE A. FAUCHER
No. 7501
LICENSED
PROFESSIONAL ENGINEER

SIGNATURE
ARCH. LIN. NUMBER
DATE FEBRUARY 5, 2014

PROJECT INFORMATION

PROGRAM	
PROJECT MANAGER	–
DESIGNER	ALLIED ENG., INC.
CONSULTANT	–
PROJECT RESIDENT	
CONTRACTOR	
PROJECT COMPLETION DATE	–

PIN NO: 020118.00

66 INDUSTRIAL DRIVE–PHASE 1
66 INDUSTRIAL DRIVE, AUGUSTA, MAINE
MAINE DEPARTMENT OF TRANSPORTATION

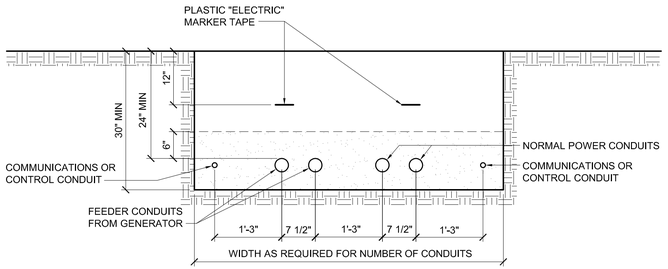
ELECTRICAL
SITE PLAN ~ PART 2

SHEET NUMBER
ES101

Allied Engineering
Structural Mechanical Electrical Commissioning
160 Veranda Street
Portland, Maine 04103
207.221.2260
207.221.2266
www.allied-eng.com

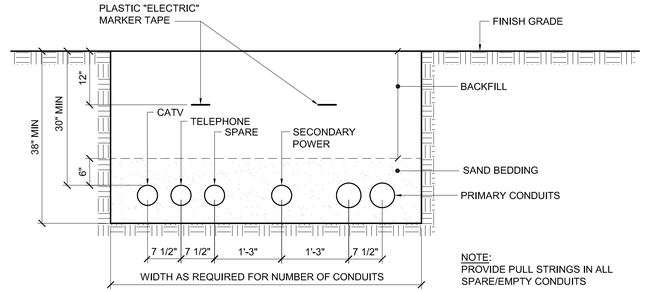
Allied Project No: 13057 Cad File: 13057_ES.DWG

N:\Projects\2013\13057 ~ BGS_MDOT Fleet Services Building\00 Drawing Files\13057_ES.dwg Feb 04, 2014 – 2:17pm



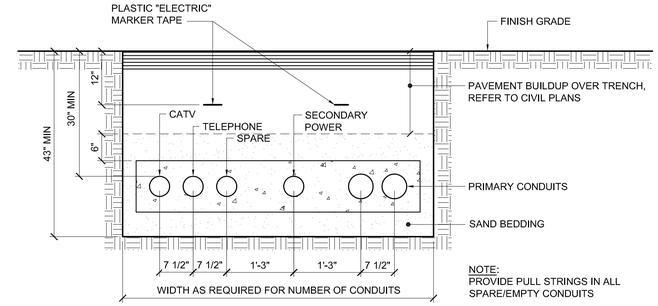
DETAIL INDICATES TYPICAL SPACING BETWEEN CONDUITS OF VARIOUS SYSTEMS, REFER TO SITE PLAN FOR SIZES AND NUMBER OF CONDUITS

F1	TYPICAL SEPARATION OF NORMAL POWER SYSTEMS
NO SCALE	TYPICAL TRENCH DETAIL



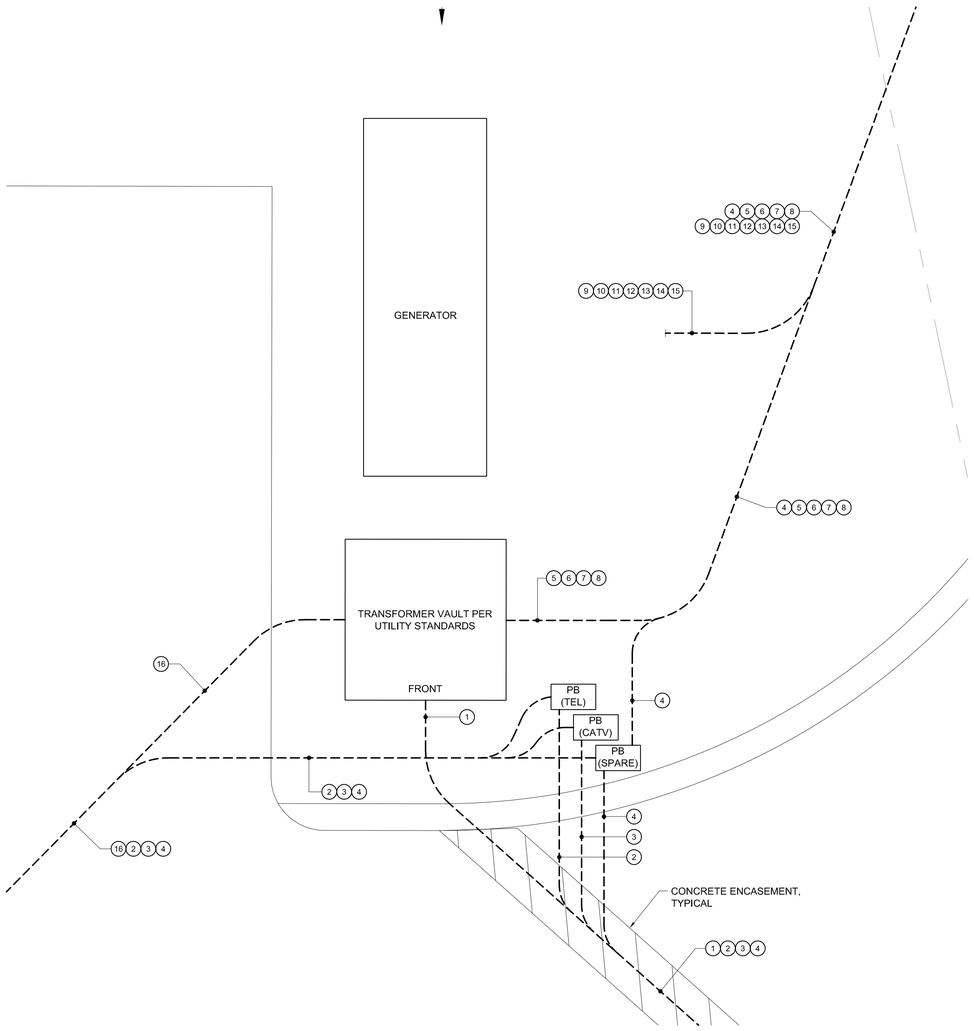
DETAIL INDICATES TYPICAL SPACING BETWEEN CONDUITS OF VARIOUS SYSTEMS, REFER TO SITE PLAN FOR SIZES AND NUMBER OF CONDUITS

F4	TYPICAL SEPARATION OF UTILITY SYSTEMS
NO SCALE	TYPICAL TRENCH DETAIL

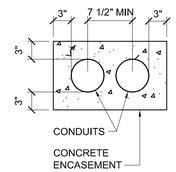


DETAIL INDICATES TYPICAL SPACING BETWEEN CONDUITS OF VARIOUS SYSTEMS, REFER TO SITE PLAN FOR SIZES AND NUMBER OF CONDUITS

F8	TYPICAL SEPARATION OF UTILITY SYSTEMS UNDER PAVEMENT
NO SCALE	TYPICAL TRENCH DETAIL



A1	ENLARGED SITE UTILITY AREA
1/4"=1'-0"	



D5	TYPICAL CONCRETE ENCASEMENT DIMENSIONS
NO SCALE	

1. (2) 5" C, PRIMARY
2. (1) 5" C, TELEPHONE
3. (1) 5" C, CATV
4. (1) 5" C SPARE
5. (1) 2" C, NORMAL POWER FOR FUTURE CONNECTION TO ATS-E
6. (2) 4" C, NORMAL POWER FOR FUTURE CONNECTION TO ATS-DP1
7. (2) 4" C, NORMAL POWER FOR FUTURE CONNECTION TO ATS-DP2
8. (1) 1" C FOR METER CONNECTION
9. (1) 2" C, GENERATOR POWER FOR FUTURE CONNECTION TO DISCONNECT SWITCH FOR ATS-E
10. (2) 4" C, GENERATOR POWER FOR FUTURE CONNECTION TO DISCONNECT SWITCH FOR ATS-DP1
11. (2) 4" C, GENERATOR POWER FOR FUTURE CONNECTION TO DISCONNECT SWITCH FOR ATS-DP2
12. (1) 1" C FOR FOR FUTURE CONNECTIONS OF JACKET WATER HEATER and BATTERY CHARGER CIRCUITS
13. (1) 1" C FOR CONTROL WIRING FOR FUTURE CONNECTION TO ATS-E, ATS-DP1 and ATS-DP2
14. (1) 1" C FOR DATA FOR FUTURE CONNECTION TO GENERATOR ANNUNCIATOR PANEL
15. (1) 1" C SPARE
16. (2) 4" C, NORMAL POWER FOR FUTURE CONNECTION TO STORAGE BUILDING
17. (1) 1" C FOR FUTURE CONNECTION OF SITE LIGHTING POWER
18. (1) 1" C FOR SIGN POWER, and (1) 1" C FOR SIGN DATA FOR FUTURE CONNECTIONS
19. (1) 1" C FOR PUMP STATION POWER, and (1) 2" C FOR PUMP STATION DATA FOR FUTURE CONNECTIONS
20. (1) 1" C FOR GATE POWER, and (1) 2" C FOR GATE DATA FOR FUTURE CONNECTIONS

A5	CONDUIT AND WIRING KEY

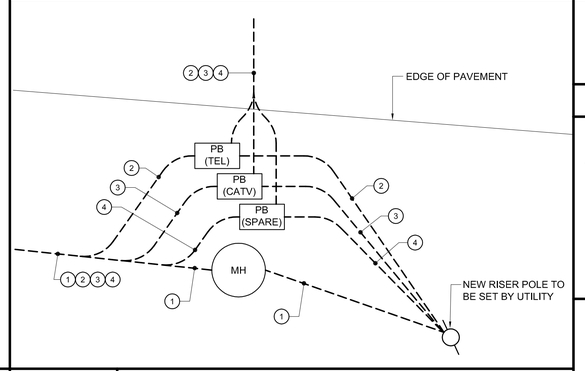
SITE LUMINAIRE SCHEDULE ~ BASIS OF DESIGN

TYPE	DESCRIPTION	MFR	CATALOG SERIES NUMBER SEE NOTE 1	MOUNTING	VOLTS	LAMP QTY PER FIXTURE	LAMP WATTS	LAMP TYPE	KEY NOTES
2A-HS	POLE LIGHT - TYPE 2 DISTRIBUTION WITH HOUSE SIDE SHIELD	PHILIPS	RVS-80W48LED4K-R-LE2-HS	25' POLE	277	-	78	LED ARRAY	
3A	POLE LIGHT - TYPE 3 DISTRIBUTION	PHILIPS	RVS-90W80LED4K-R-LE4	25' POLE	277	-	85	LED ARRAY	
4A	POLE LIGHT - TYPE 4 DISTRIBUTION	PHILIPS	RVS-90W80LED4K-R-LE3	25' POLE	277	-	100	LED ARRAY	
3B-HS	POLE LIGHT - TYPE 3 DISTRIBUTION	PHILIPS	RVM-160W96LED4K-R- LE3	40' POLE	277	-	160	LED ARRAY	
3B-HS	POLE LIGHT - TYPE 3 DISTRIBUTION WITH HOUSE SIDE SHIELD	PHILIPS	RVM-160W96LED4K-R- LE3-HS	40' POLE	277	-	155	LED ARRAY	
4B	POLE LIGHT - TYPE 4 DISTRIBUTION	PHILIPS	RVM-160W96LED4K-R- LE4	40' POLE	277	-	160	LED ARRAY	
	NOTES								
1	**NOTE THAT THESE NUMBERS ARE NOT COMPLETE CATALOG #'S. PROVIDE ALL REQUIREMENTS ON SCHEDULE,NOTES, SPECS, AND DRAWINGS COMBINED.**								
2	**CATALOG SERIES NUMBERS ARE USED TO ESTABLISH A LEVEL OF QUALITY AND NOT INTENDED TO LIMIT COMPETITION. SERIES NUMBERS ARE NOT COMPLETE CATALOG NUMBERS. COMPLY WITH ADDITIONAL REQUIREMENTS IN SPECIFICATIONS AND DRAWINGS.**								

NOTE:

LUMINAIRE SCHEDULE IS INCLUDED FOR INFORMATION ONLY. LUMINAIRES ARE NOT TO BE FURNISHED UNDER THIS CONTRACT.

C7	LUMINAIRE SCHEDULE



A7	ENLARGED SITE UTILITY AREA
1/4"=1'-0"	

ISSUED FOR BID

FEBRUARY 5, 2014

PROJECT KEY PLAN

PLAN NORTH

Allied Engineering
Structural Mechanical Electrical Commissioning
160 Veranda Street
Portland, Maine 04103
207.221.2260
207.221.2266
www.allied-eng.com

Allied Project No: 13057 Cad File: 13057_ES.DWG

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

DATE

COMMISIONER:

CHIEF ENGINEER:

STATE OF MAINE CATHERINE A. FAUCHER No. 7571 LICENSED PROFESSIONAL ENGINEER

SIGNATURE

ARCH. LIN. NUMBER

DATE FEBRUARY 5, 2014

PROJECT INFORMATION

PROGRAM	
PROJECT MANAGER	
DESIGNER	ALLIED ENG., INC.
CONSULTANT	–
PROJECT RESIDENT	
CONTRACTOR	–
PROJECT COMPLETION DATE	–

PIN NO: 020118.00

66 INDUSTRIAL DRIVE–PHASE 1
66 INDUSTRIAL DRIVE, AUGUSTA, MAINE
MAINE DEPARTMENT OF TRANSPORTATION

ELECTRICAL SITE DETAILS

SHEET NUMBER

ES500

N:\Projects\2013\13057 ~ BGS_MDOT Fleet Services Building\00 Drawing Files\13057_ES.dwg Feb 04, 2014 – 2:17pm