Attachment A

GENERAL NOTES

1. BOUNDARY & TOPOGRAPHIC INFORMATION IS BASED UPON FIELD SURVEY & AERIAL TOPOGRAPHIC SURVEY PREPARED BY: CIVIL 1, INC.

2. INFORMATION REGARDING THE LOCATION OF EXISTING UTILITIES HAS BEEN BASED UPON AVAILABLE INFORMATION AND MAY BE INCOMPLETE, AND WHERE SHOWN SHOULD BE CONSIDERED APPROXIMATE. THE LOCATION OF ALL EXISTING UTILITIES SHOULD BE CONFIRMED PRIOR TO BEGINNING CONSTRUCTION. CALL "CALL BEFORE YOU DIG", 1-800-922-4455. ALL UTILITY LOCATIONS THAT DO NOT MATCH THE VERTICAL OR HORIZONTAL CONTROL SHOWN ON THE PLANS SHALL IMMEDIATELY BE BROUGHT TO THE ATTENTION OF THE ENGINEER FOR RESOLUTION.

3. CIVIL 1 ACCEPTS NO RESPONSIBILITY FOR THE ACCURACY OF MAPS AND DATA WHICH HAVE BEEN SUPPLIED BY OTHERS.

4. ALL PROPOSED UTILITY SERVICES ARE TO BE UNDERGROUND. THE EXACT LOCATION AND SIZE OF ELECTRIC, TELEPHONE, CABLE TELEVISION AND GAS ARE TO BE DETERMINED BY THE RESPECTIVE UTILITY COMPANIES.

5. ALL DIMENSIONS AND ELEVATIONS SHALL BE VERIFIED IN THE FIELD PRIOR TO CONSTRUCTION. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER.

6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING UTILITY LOCATIONS IN THE FIELD AND TAKING ALL NECESSARY STEPS TO PROTECT THEM FROM DAMAGE. ANY UTILITY THAT IS DAMAGED THROUGH THE NEGLIGENCE OF THE CONTRACTOR SHALL BE REPAIRED BY THE CONTROLLING UTILITY COMPANY AT THE CONTRACTOR'S EXPENSE.

7. THE CONTRACTOR SHALL PROTECT EXISTING UTILITIES AND STRUCTURES. THOSE OF WHICH HAVE BEEN DAMAGED SHALL BE PROMPTLY REPAIRED TO EXISTING OR BETTER CONDITION AT THE CONTRACTOR'S EXPENSE.

8. SEDIMENT AND EROSION CONTROL MEASURES AS DEPICTED ON THESE PLANS AND DESCRIBED WITHIN THE SEDIMENT AND EROSION CONTROL NARRATIVE SHALL BE IMPLEMENTED AND MAINTAINED UNTIL PERMANENT COVER AND STABILIZATION IS ESTABLISHED. ALL SEDIMENT AND EROSION CONTROL MEASURES SHALL CONFORM TO THE "GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL CONNECTICUT – 2002", AND IN ALL CASES BEST MANAGEMENT PRACTICES SHALL PREVAIL.

9. ALL DISTURBED AREAS SHALL RECEIVE A MINIMUM OF 6" TOPSOIL. AND BE SEEDED WITH GRASS OR SODDED, AS SHOWN ON THE PLANS.

10. ALL STORM DRAIN PIPE SHALL BE REINFORCED CONCRETE PIPE (RCP) UNLESS OTHERWISE INDICATED.

11 ALL GRAVITY SANITARY SEWER PIPE SHALL BE PVC SDR35 UNLESS OTHERWISE INDICATED.

12. ALL PROPOSED CONTOURS AND SPOT ELEVATIONS INDICATE FINISHED GRADE.

13. THE CONTRACTOR SHALL ADJUST ELEVATIONS OF ALL EXISTING STORM, SANITARY SEWER, AND PRIVATE UTILITY MANHOLE FRAMES AND COVERS, AND ALL UTILITY CAPS AND COVERS SO THEY ARE FLUSH WITH FINISHED GRADES. THERE WILL BE NO SEPARATE PAYMENT FOR THIS WORK.

14. ALL CONSTRUCTION MATERIALS AND METHODS SHALL CONFORM TO THE BOROUGH OF NAUGATUCK REQUIREMENTS AND TO THE APPLICABLE SECTIONS OF THE STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROADS, BRIDGES, AND INCIDENTAL CONSTRUCTION, FORM 818 AND ADDENDUMS.

15. CONTRACTOR TO PLUG ALL EXISTING PIPES WHERE CURRENT DRAINAGE SYSTEM IS TO BE ABANDONED UNLESS OTHERWISE NOTED ON PLANS.

16. THE CONTRACTOR SHALL MAINTAIN ACCESS TO ALL ACTIVE EXISTING DRIVEWAYS TO BUSINESSES, RESIDENCES AND BOROUGH FACILITIES DURING CONSTRUCTION TO THE GREATEST EXTENT PRACTICABLE WITH BRIEF CLOSURES ALLOWED FOR FINAL PAVING OR OTHER RESTRICTING ACTIVITIES.

17. CLOSURE OF THE ROADWAYS SHALL BE COORDINATED WITH THE BOROUGH OF NAUGATUCK. THE CONTRACTOR SHALL INFORM THE BOROUGH TWO WEEKS IN ADVANCE OF THE SCHEDULED CLOSURE. CONTRACTOR SHALL PROVIDE ACCESS OR MAINTAIN A DETOUR FOR EMERGENCY VEHICLES AT ALL TIMES.

18. THE CONTRACTOR SHALL RESET ANY DISTURBED MONUMENTS TO THE PROPER ELEVATION AND LOCATION AT HIS OWN EXPENSE. (THE ENGINEER MUST BE NOTIFIED WHEN THIS IS DONE.)

19. CONTRACTOR IS RESPONSIBLE FOR MINIMIZING THE AREA OF EROSION PRONE EXPOSED SOILS. ALL SOILS TO BE EXPOSED FOR OVER 30 DAYS SHALL BE MULCHED. CONTRACTOR SHALL INSTALL AND MAINTAIN SOIL EROSION AND SEDIMENT CONTROLS, AND AUGMENTED AS NEEDED TO MINIMIZE EROSION.

20. THE PLANS REQUIRE A CONTRACTOR'S WORKING KNOWLEDGE OF LOCAL, MUNICIPAL, WATER AUTHORITY, AND STATE CODES FOR UTILITY SYSTEMS. ANY CONFLICTS BETWEEN MATERIALS AND LOCATIONS SHOWN, AND LOCAL REQUIREMENTS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO THE EXECUTION OF WORK. THE ENGINEER WILL NOT BE HELD LIABLE FOR COSTS INCURRED TO IMPLEMENT OR CORRECT WORK WHICH DOES NOT CONFORM TO LOCAL CODE.

21. COMPLIANCE WITH ANY PERMIT CONDITIONS IS THE RESPONSIBILITY OF BOTH THE CONTRACTOR AND THE PERMITTEE.

22. THE CONTRACTOR MUST MAINTAIN (REPAIR/REPLACE WHEN NECESSARY) THE SILTATION CONTROL UNTIL ALL DEVELOPMENT ACTIVITY IS COMPLETED AND ALL DISTURBED AREAS ARE PERMANENTLY STABILIZED.

23. CATCH BASINS DAMAGED OR FILLED WITH DEBRIS DURING CONSTRUCTION SHALL BE REPLACED OR CLEANED AT THE CONTRACTOR'S EXPENSE.

24. THE CONTRACTOR IS HEREBY REMINDED THAT TITLE 16 CHAPTER 293 OF THE CONNECTICUT GENERAL STATUTES REQUIRES NOTIFICATION TO UTILITY COMPANIES OF PENDING EXCAVATION AT OR NEAR PUBLIC UTILITIES. THE CONTRACTOR SHALL CALL 1-800-922-4455 AT LEAST 72 HOURS PRIOR TO EXCAVATION, BUT NO MORE THAN 30 DAYS IN ADVANCE.

25. LINE AND GRADE FOR CONSTRUCTION LAYOUT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL UTILIZE A PROFESSIONAL SURVEYOR LICENSED IN THE STATE OF CONNECTICUT TO PERFORM CONSTRUCTION LAYOUT. THE CONTRACTOR SHALL SUBMIT THE NAME OF THE SURVEYOR TO THE ENGINEER AT LEAST 3 WEEKS PRIOR TO BEGINNING WORK.

26. ANY PUBLIC OR PRIVATE PROPERTY DISTURBED AS A RESULT OF CONSTRUCTION OPERATIONS SHALL BE RESTORED AS QUICKLY AS POSSIBLE AND TO THE SATISFACTION OF THE ENGINEER.

27. EACH LAYER OF MATERIAL USED FOR BACKFILL OR SUBGRADE SHALL BE COMPACTED UNTIL THE DRY DENSITY OF EACH LAYER IS AT LEAST 95% OF THE DRY DENSITY ACHIEVED BY THE AASHTO TEST T180, METHOD D FOR THAT SOIL. MAXIMUM LAYER THICKNESS NOT TO EXCEED 12".

28. A STREET OPENING PERMIT IS REQUIRED FOR ALL WORK WITHIN THE BOROUGH OF NAUGATUCK RIGHT-OF-WAY.

29. ALL WORK ON BOROUGH OF NAUGATUCK PROPERTY SHALL BE CONSTRUCTED TO BOROUGH REQUIREMENTS, THE STATE OF CONNECTICUT BASIC BUILDING CODE AND THE CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENTATION CONTROL.

30. ALL RETAINING WALLS GREATER THAN FOUR (4) FEET ARE REQUIRED TO BE DESIGNED, AND INSPECTED DURING CONSTRUCTION BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF CONNECTICUT, CERTIFICATION OF THE RETAINING WALL SHALL BE REQUIRED PRIOR TO ISSUANCE OF A CERTIFICATE OF OCCUPANCY AND/OR BOND RELEASE.

31. CERTIFICATION WILL BE REQUIRED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF CONNECTICUT THAT WORK HAS BEEN COMPLETED IN COMPLIANCE WITH THE APPROVED DRAWINGS.

32. A FINAL AS-BUILT LOCATION PLAN WILL BE REQUIRED BY A PROFESSIONAL LAND SURVEYOR LICENSED IN THE STATE OF CONNECTICUT.

APPLICANT/OWNER

BOROUGH OF NAUGATUCK
229 CHURCH STREET
NAUGATUCK, CT 06770

ENGINEER / SURVEYOR

CIVIL 1, INC.
43 SHERMAN HILL ROAD
SUITE D-101
WOODBURY, CT 06798

NAUGATUCK INDUSTRIAL COMMONS - PHASE 2A ROADWAY IMPROVEMENTS

SITE DEVELOPMENT PLANS

75% COMPLETE

BOROUGH OF NAUGATUCK

VICINITY MAP

2000 0 1000 2000 4000

1 inch = 2000 ft.

CIVIL 1

CORNERSTONE PROFESSIONAL PARK, SUITE D-101
43 SHERMAN HILL ROAD
WOODBURY (203) 266 - 0778 CONNECTICUT

JUNE 29, 2023
REVISED JULY 17, 2023

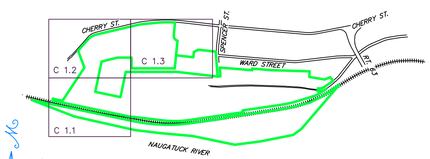
STATE OF CONNECTICUT · CURTIS C. JOHSEN · No. 17208 · LICENSED PROFESSIONAL ENGINEER

DRAWING NO.	SHEET NO.	DESCRIPTION
1	–	COVER SHEET
2	C 1.0	OVERALL EXISTING CONDITIONS PLAN
3	C 1.1	EXISTING CONDITIONS PLAN
4	C 1.2	EXISTING CONDITIONS PLAN
5	C 1.3	EXISTING CONDITIONS PLAN
6	C 2.0	OVERALL SITE LAYOUT PLAN
7	C 2.1	SITE LAYOUT PLAN
8	C 2.2	SITE LAYOUT PLAN
9	C 2.3	SITE LAYOUT PLAN
10	C 3.0	OVERALL GRADING, DRAINAGE & UTILITY PLAN
11	C 3.1	GRADING, DRAINAGE & UTILITY PLAN
12	C 3.2	GRADING, DRAINAGE & UTILITY PLAN
13	C 3.3	GRADING, DRAINAGE & UTILITY PLAN
14	C 4.1	ROADWAY PROFILES – BUILDING A ACCESS ROAD
15	C 4.2	ROADWAY PROFILES – THROUGH ROAD
16	C 4.3	STORM DRAINAGE PROFILES
17	C 4.4	STORM DRAINAGE PROFILES
18	C 5.1	DETAILS
19	C 5.2	DETAILS
20	C 5.3	DETAILS
21	C 5.4	DETAILS
22	C 6.0	EROSION CONTROL NARRATIVE & PROJECT NOTES

LEGEND

- PROPERTY LINE
- MAJOR CONTOUR
- MINOR CONTOUR
- EXISTING CURB LINE
- CHAIN LINK FENCE
- GUARD RAIL
- EXISTING GAS
- EXISTING WATER
- EXISTING SANITARY SEWER
- EXISTING STORM SEWER
- EXISTING CABLE
- EXISTING UNDERGROUND ELECTRIC
- EXISTING OVERHEAD WIRES
- EXISTING GRADING, DRAINAGE OR ACCESS EASEMENT
- EXISTING SANITARY SEWER EASEMENT
- EXISTING WATER EASEMENT
- EXISTING GAS EASEMENT
- CATCH BASIN
- STORM MANHOLE
- SANITARY MANHOLE
- FIRE HYDRANT
- UTILITY POLE
- LIGHT POLE
- WATER VALVE
- GAS VALVE
- TRAFFIC BOX

CHERRY STREET EXT.
CHERRY STREET
CHARLES
WARD STREET
SPENCER STREET
ELM STREET
ANIMAL CONTROL
NAUGATUCK WASTEWATER TREATMENT PLANT
LOT 1A BOROUGH OF NAUGATUCK 2,170,008 SF 49.82 ACRES
LOT 1B LANXESS 395,282 SF 9.07 ACRES
LOT 2 BOROUGH OF NAUGATUCK 287,750 SF 6.83 ACRES
LOT 3 BOROUGH OF NAUGATUCK 846,944 SF 19.44 ACRES
SHEET C–1.1
SHEET C–1.2
SHEET C–1.3
NEW YORK, NEW HAVEN & HARTFORD RAILROAD
NAUGATUCK RIVER



SHEET INDEX

NO.	REVISION	DATE
	Previous Editions Obsolete	

100 0 50 100 200

1 inch = 100 ft.

BOROUGH OF NAUGATUCK
229 CHURCH STREET
NAUGATUCK, CT 06770
CLIENT

OVERALL EXISTING CONDITIONS PLAN

NAUGATUCK INDUSTRIAL COMMONS
PHASE 2A IMPROVEMENTS
NAUGATUCK CONNECTICUT

CIVIL 1
CORNERSTONE PROFESSIONAL PARK, SUITE D-101
43 SHERMAN HILL ROAD
(203) 266-0778
WOODBURY CONNECTICUT

STATE OF CONNECTICUT · CURTIS C. JONES · No. 21208 · LICENSED PROFESSIONAL ENGINEER

DRAWN: BB	APPROVED: CJ
SCALE:	1" = 100'
DATE:	29 JUNE 23
PROJ. NO.:	3535
CADD FILE NAME:	3535
DRAWING NO.:	C-1.0

MATCH LINE SHEET C 1.2

15' WIDE WATERLINE EASEMENT TO REMAIN

RESTRICTED PARKING AREA EASEMENT

20' W SEWER EASEMENT IN FAVOR OF LANXESS TO REMAIN.

20' W WATER EASEMENT IN FAVOR OF LANXESS TO REMAIN.

20' WIDE SEWER EASEMENT IN FAVOR OF LANXESS TO REMAIN.

EXISTING 45' W ACCESS EASEMENT (TO BE ABANDONED)

EX. 20' W SAN. SEWER EASEMENT IN FAVOR OF LANXESS TO REMAIN

EX. WATER LATERAL SIZE UNKNOWN

LANXESS

LOT 1B
LANXESS
395,282 SF
9.07 ACRES

NEW YORK, NEW HAVEN & HARTFORD RAILROAD

NAUGATUCK RIVER

LEGEND

- PROPERTY LINE
- MAJOR CONTOUR
- MINOR CONTOUR
- EXISTING CURB LINE
- CHAIN LINK FENCE
- GUARD RAIL
- EXISTING GAS
- EXISTING WATER
- EXISTING SANITARY SEWER
- EXISTING STORM SEWER
- EXISTING CABLE
- EXISTING UNDERGROUND ELECTRIC
- EXISTING OVERHEAD WIRES
- EXISTING GRADING, DRAINAGE OR ACCESS EASEMENT
- EXISTING SANITARY SEWER EASEMENT
- EXISTING WATER EASEMENT
- EXISTING GAS EASEMENT
- CATCH BASIN
- STORM MANHOLE
- SANITARY MANHOLE
- FIRE HYDRANT
- UTILITY POLE
- LIGHT POLE
- WATER VALVE
- GAS VALVE
- TRAFFIC BOX

NO.	REVISION	DATE

Previous Editions Obsolete

40 0 20 40 80

1 inch = 40 ft.

BOROUGH OF NAUGATUCK
229 CHURCH STREET
NAUGATUCK, CT 06770

CLIENT

EXISTING CONDITIONS PLAN

NAUGATUCK INDUSTRIAL COMMONS
PHASE 2A IMPROVEMENTS

NAUGATUCK CONNECTICUT

CIVIL 1
CORNERSTONE PROFESSIONAL PARK, SUITE D-101
43 SHERMAN HILL ROAD
WOODBURY (203) 266-0778 CONNECTICUT

STATE OF CONNECTICUT · CURTIS C. JOHNSON · No. 27208 · LICENSED PROFESSIONAL ENGINEER

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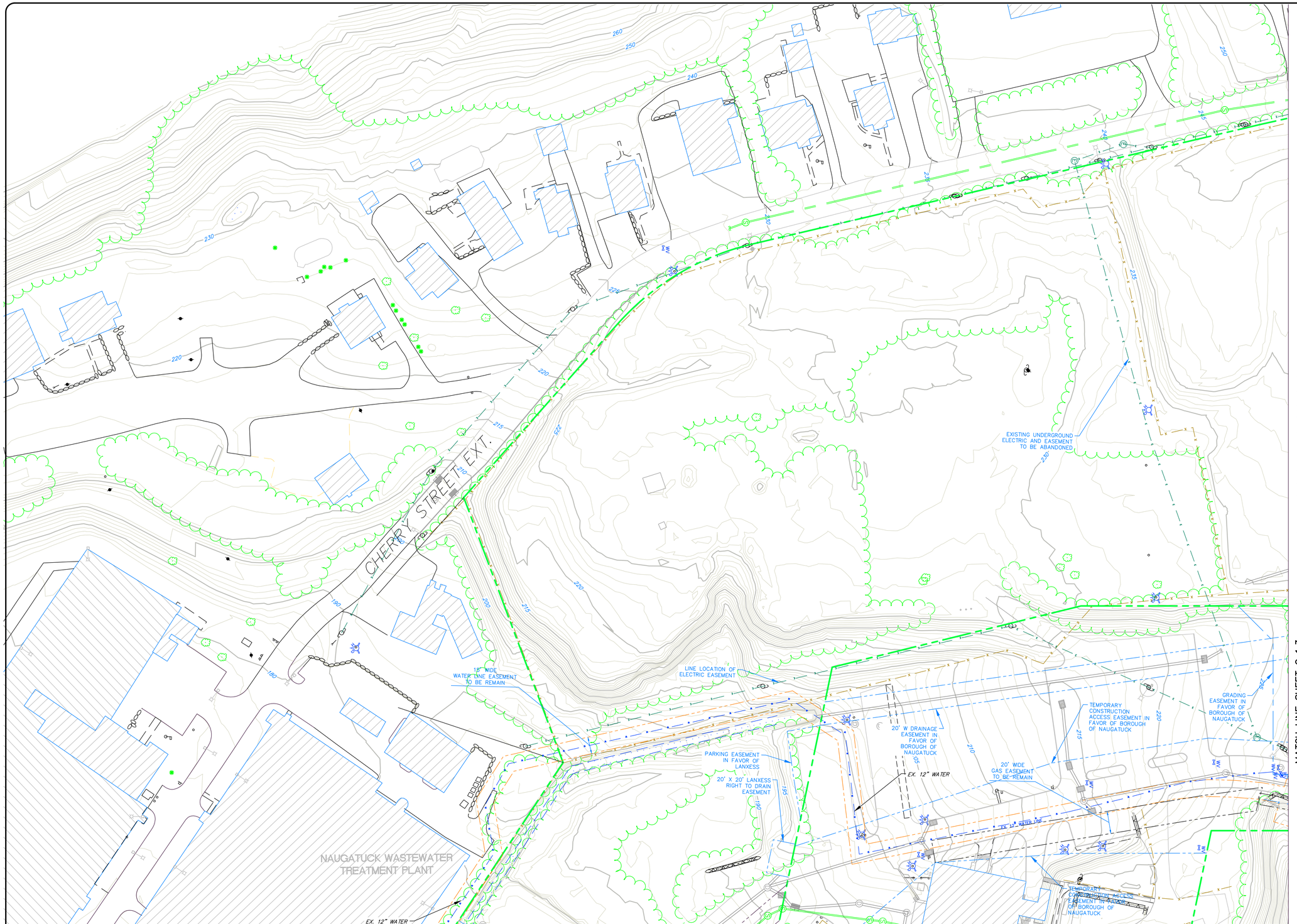
DRAWING NO.: C-1.1



LEGEND

- PROPERTY LINE
- MAJOR CONTOUR
- MINOR CONTOUR
- EXISTING CURB LINE
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BOROUGH OF NAUGATUCK
229 CHURCH STREET
NAUGATUCK, CT 06770
CLIENT

EXISTING CONDITIONS PLAN

NAUGATUCK INDUSTRIAL COMMONS
PHASE 2A IMPROVEMENTS
NAUGATUCK CONNECTICUT

CIVIL C1
CORNERSTONE PROFESSIONAL PARK, SUITE D-101
43 SHERMAN HILL ROAD
WOODBURY (203) 266-0778 CONNECTICUT

STATE OF CONNECTICUT · CURTIS C. JONES · No. 17008 · LICENSED PROFESSIONAL ENGINEER

DRAWN: BB	APPROVED: CJ
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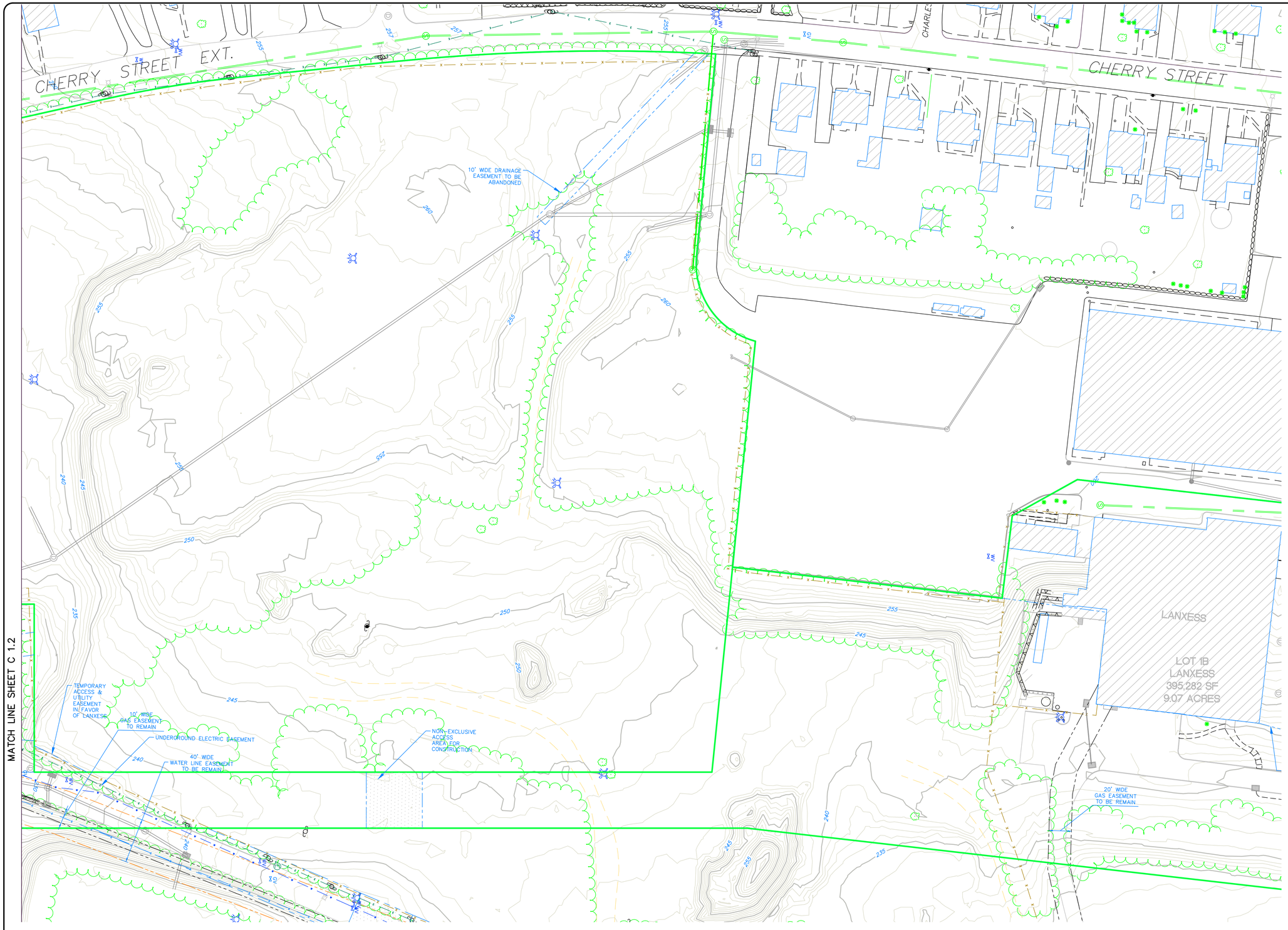

LEGEND

- PROPERTY LINE
- MAJOR CONTOUR
- MINOR CONTOUR
- EXISTING CURB LINE
- CHAIN LINK FENCE
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- EXISTING GAS
- EXISTING WATER
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BOROUGH OF NAUGATUCK
229 CHURCH STREET
NAUGATUCK, CT 06770
CLIENT

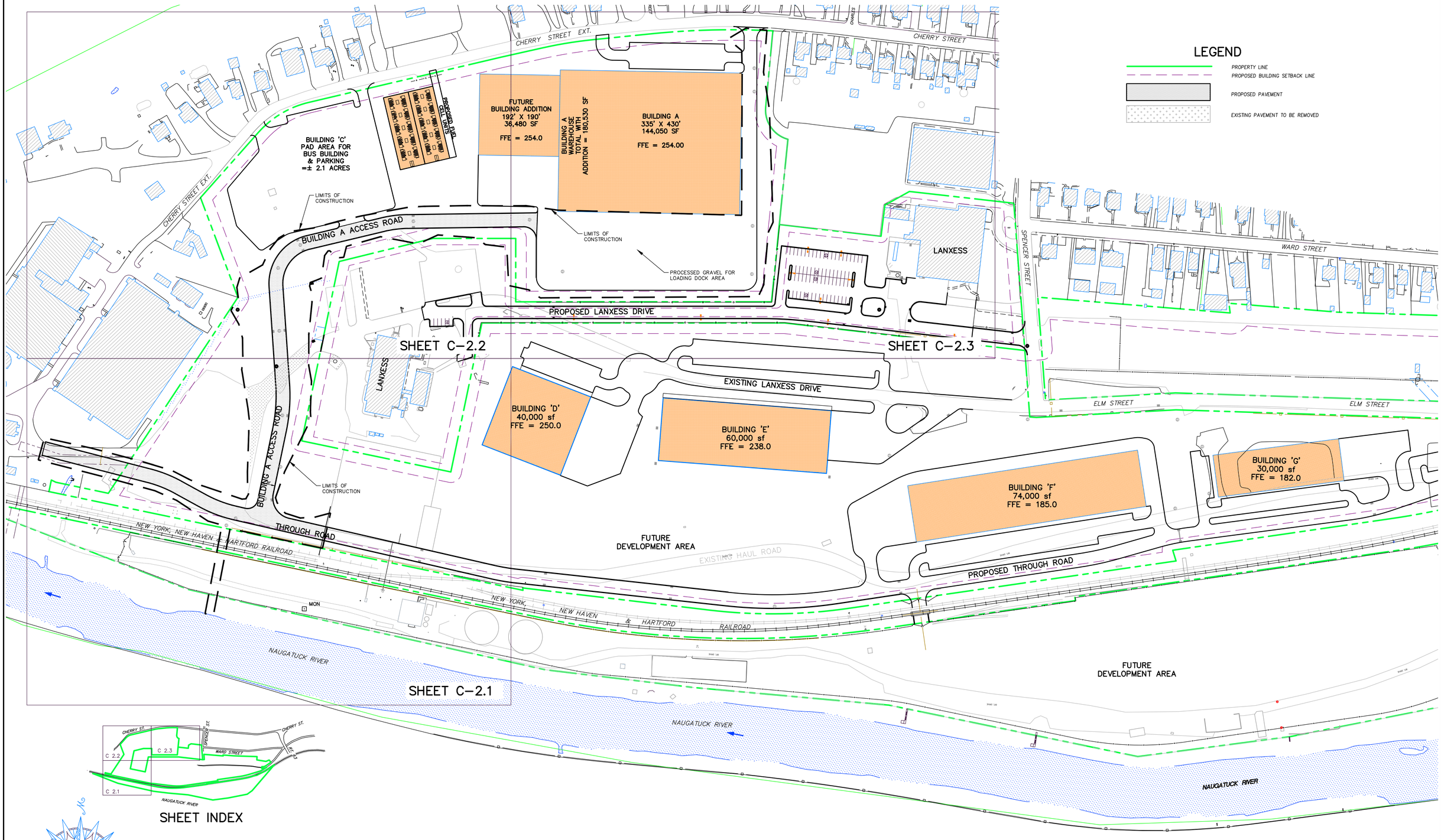
EXISTING CONDITIONS PLAN

NAUGATUCK INDUSTRIAL COMMONS
PHASE 2A IMPROVEMENTS
NAUGATUCK CONNECTICUT

CIVIL 1
CORNERSTONE PROFESSIONAL PARK, SUITE D-101
43 SHERMAN HILL ROAD
WOODBURY (203) 266-0778 CONNECTICUT

STATE OF CONNECTICUT CURTIS C. JONES No. 17208 LICENSED PROFESSIONAL ENGINEER

DRAWN: BB APPROVED: CJ
SCALE: 1" = 40'
DATE: 29 JUN 23
PROJ. NO.: 3535
CADD FILE NAME: 3535
DRAWING NO.: C-1.3



SHEET INDEX

NO.	REVISION	DATE
1	GENERAL REVISIONS	17 JUL 23

Previous Editions Obsolete

100 0 50 100 200

1 inch = 100 ft.

BOROUGH OF NAUGATUCK
229 CHURCH STREET
NAUGATUCK, CT 06770
CLIENT

OVERALL SITE LAYOUT PLAN

NAUGATUCK INDUSTRIAL COMMONS
PHASE 2A IMPROVEMENTS
NAUGATUCK CONNECTICUT

CIVIL C1
CORNERSTONE PROFESSIONAL PARK, SUITE D-101
43 SHERMAN HILL ROAD
(203) 266 - 0778
WOODBURY CONNECTICUT

STATE OF CONNECTICUT · CURTIS C. JONES · No. 17208 · LICENSED PROFESSIONAL ENGINEER

DRAWN: BB APPROVED: CJ
SCALE: 1" = 100'
DATE: 29 JUNE 23
PROJ. NO.: 3535
CADD FILE NAME: 3535
DRAWING NO.: C-2.0

MATCH LINE SHEET C 2.2

LIMITS OF CONSTRUCTION

PT: 3+23.97

3+00

R400'

PC: 2+14.59

2+00

32'

PR. BIT DRIVE

PR. BIT CURB

1+00

LIMITS OF CONSTRUCTION

PT: 4+79.67

PC: 3+86.63

R300'

4+00

3+00

PT: 3+31.36

PC: 2+56.35

R300'

2+00

1+00

BP: 0+00.00

R25'

R50'

0+00

6+00

THROUGH ROAD

BP: 0+00.00

END PAVEMENT PHASE 2A

BLEND WITH GRAVEL DRIVE TO STA. 9+00 TO EX. HAUL ROAD TO MAINTAIN ACCESS AS PART OF 2A IMPROVEMENTS

8+00

9+00

10+00

11+00

PC: 11+03.84

LANXESS

NEW YORK, NEW HAVEN & HARTFORD RAILROAD

1+00

2+00

2+25

EP: 2+25.00

MON

NAUGATUCK RIVER

LEGEND

- PROPERTY LINE
- PROPOSED BUILDING SETBACK LINE
- PROPOSED PAVEMENT
- EXISTING PAVEMENT TO BE REMOVED

NO.	REVISION	DATE
	Previous Editions Obsolete	

40 0 20 40 80

1 inch = 40 ft.

BOROUGH OF NAUGATUCK
229 CHURCH STREET
NAUGATUCK, CT 06770
CLIENT

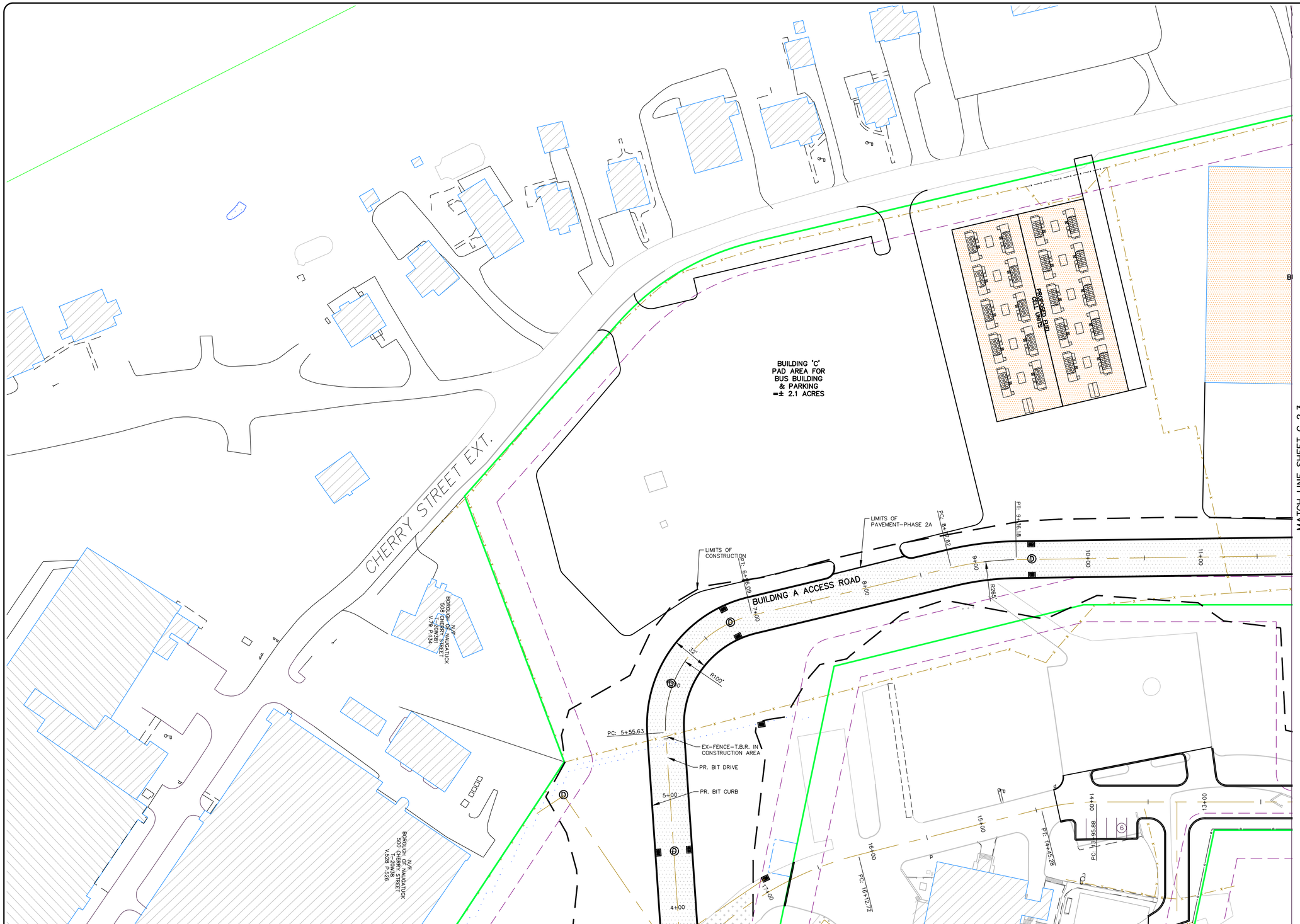
SITE LAYOUT PLAN

NAUGATUCK INDUSTRIAL COMMONS
PHASE 2A IMPROVEMENTS
NAUGATUCK CONNECTICUT

CIVIL 1
CORNERSTONE PROFESSIONAL PARK, SUITE D-101
43 SHERMAN HILL ROAD
WOODBURY (203) 266 - 0778 CONNECTICUT

STATE OF CONNECTICUT CURTIS C. JONES No. 17208 LICENSED PROFESSIONAL ENGINEER

DRAWN: BB	APPROVED: CJ
SCALE:	1" = 40'
DATE:	29 JUN 23
PROJ. NO.:	3535
CADD FILE NAME:	3535
DRAWING NO.:	C-2.1



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BOROUGH OF NAUGATUCK
229 CHURCH STREET
NAUGATUCK, CT 06770
CLIENT

SITE LAYOUT PLAN

NAUGATUCK INDUSTRIAL
COMMONS
PHASE 2A IMPROVEMENTS
NAUGATUCK CONNECTICUT

CIVIL 1
CORNERSTONE PROFESSIONAL PARK, SUITE D-101
43 SHERMAN HILL ROAD
WOODBURY (203) 266-0778 CONNECTICUT

STATE OF CONNECTICUT
CURTIS C. JONES
No. 17008
LICENSED
PROFESSIONAL ENGINEER

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DRAWING NO.: **C-2.2**


CHERRY STREET EXT.
CHERRY STREET
CHARLES
LEGEND
PROPERTY LINE
PROPOSED BUILDING SETBACK LINE
PROPOSED PAVEMENT
EXISTING PAVEMENT TO BE REMOVED
FUTURE
UILDING ADDITION
192' X 190'
36,480 SF
FFE = 254.0
BUILDING A
WAREHOUSE
TOTAL WITH
ADDITION = 180,530 SF
BUILDING A
335' X 430'
144,050 SF
FFE = 254.00
PR. PROCESSED GRAVEL
SURFACE OUT TO
CHERRY STREET EXT.
PART OF PHASE 2A
N/F
USCO DISTRIBUTION SERVICES INC
22 SPENCER STREET
V.570 P.507
MATCH LINE SHEET C 2.2
LIMITS OF
CONSTRUCTION
END OF
PAVEMENT-PHASE 2A
PR. PROCESSED GRAVEL
SURFACE
LIMITS OF
CONSTRUCTION
LANXESS
PROPOSED LANXESS DRIVE
12+00
11+00
10+00
9+00
8+00
7+00
6+00
5+00
4+00
3+00
2+00
1+00
PT: 6+31.60
PC: 5+16.27
22
16
16
16

NO.	REVISION	DATE

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40 0 20 40 80

1 inch = 40 ft.

BOROUGH OF NAUGATUCK
229 CHURCH STREET
NAUGATUCK, CT 06770

CLIENT

SITE LAYOUT PLAN

NAUGATUCK INDUSTRIAL COMMONS
PHASE 2A IMPROVEMENTS

NAUGATUCK CONNECTICUT

CIVIL 1
CORNERSTONE PROFESSIONAL PARK, SUITE D-101
43 SHERMAN HILL ROAD
(203) 266-0778
WOODBURY CONNECTICUT

STATE OF CONNECTICUT
CURTIS C. JONES
No. 17208
LICENSED
PROFESSIONAL ENGINEER

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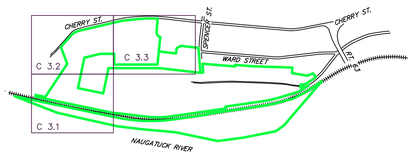
DRAWING NO.:	C-2.3

LEGEND

- PROPERTY LINE
- MAJOR CONTOUR
- MINOR CONTOUR
- EXISTING CURB LINE
- CHAIN LINK FENCE
- GUARD RAIL
- EXISTING GAS
- EXISTING WATER
- EXISTING SANITARY SEWER
- EXISTING STORM SEWER
- EXISTING CABLE
- EXISTING UNDERGROUND ELECTRIC
- EXISTING OVERHEAD WIRES
- EXISTING GRADING, DRAINAGE OR ACCESS EASEMENT
- EXISTING SANITARY SEWER EASEMENT
- EXISTING WATER EASEMENT
- EXISTING GAS EASEMENT
- CATCH BASIN
- STORM MANHOLE
- SANITARY MANHOLE
- FIRE HYDRANT
- UTILITY POLE
- LIGHT POLE
- WATER VALVE
- GAS VALVE
- TRAFFIC BOX
- PROPOSED CONTOUR
- PROPOSED SPOT GRADE (+8.3)
- PROPOSED STORM STRUCTURE
- PROPOSED STORM SEWER
- PROPOSED LIMITS OF CONSTRUCTION
- PROPOSED SILT FENCE
- PROPOSED TIMBER GUIDE RAIL

CHERRY STREET EXT.
CHERRY STREET
CHARLES ST.
FUTURE BUILDING ADDITION 192' X 190' 36,480 SF FFE = 254.0
BUILDING A WAREHOUSE TOTAL WITH ADDITION = 180,530 SF
BUILDING A 335' X 430' 144,050 SF FFE = 254.00
BUILDING 'C' PAD AREA FOR BUS BUILDING & PARKING =± 2.1 ACRES
LIMITS OF CONSTRUCTION
BUILDING A ACCESS ROAD
LIMITS OF CONSTRUCTION
PROCESSED GRAVEL FOR LOADING DOCK AREA
LANXESS
SPENCER STREET
WARD STREET
PROPOSED LANXESS DRIVE
SHEET C-3.2
SHEET C-3.3
LANXESS
EXISTING LANXESS DRIVE
EX. GAS
ELM STREET
BUILDING 'D' 40,000 sf FFE = 250.0
BUILDING 'E' 60,000 sf FFE = 238.0
BUILDING 'F' 74,000 sf FFE = 185.0
BUILDING 'G' 30,000 sf FFE = 182.0
LIMITS OF CONSTRUCTION
THROUGH ROAD
NEW YORK, NEW HAVEN & HARTFORD RAILROAD
EXISTING HAUL ROAD
PROPOSED THROUGH ROAD
MON
NEW YORK, NEW HAVEN & HARTFORD RAILROAD
NAUGATUCK RIVER
SHEET C-3.1
NAUGATUCK RIVER
NAUGATUCK RIVER



SHEET INDEX

NO.	REVISION	DATE

Previous Editions Obsolete

100 0 50 100 200

1 inch = 100 ft.

BOROUGH OF NAUGATUCK
229 CHURCH STREET
NAUGATUCK, CT 06770
CLIENT

OVERALL GRADING, DRAINAGE & UTILITY PLAN

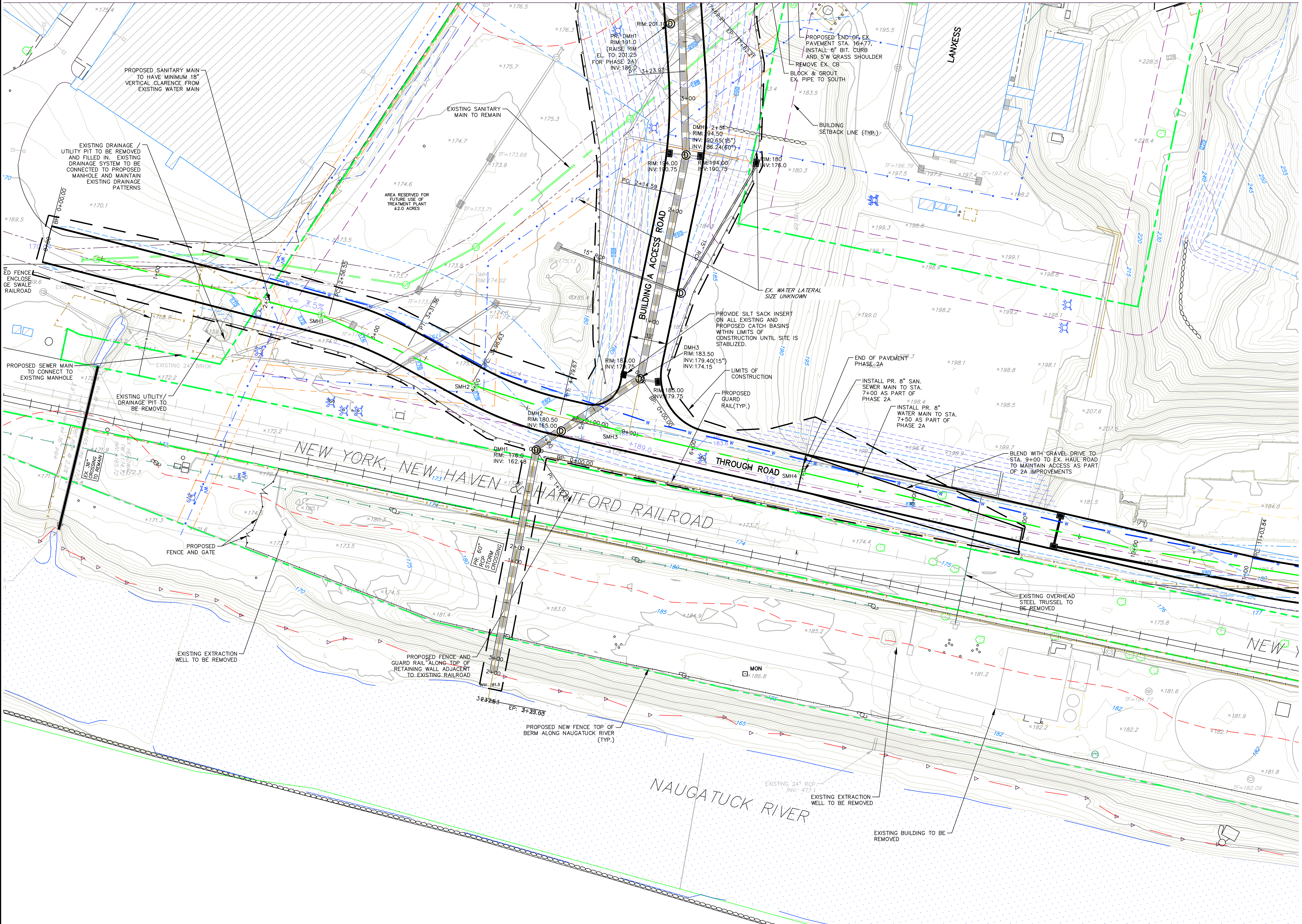
NAUGATUCK INDUSTRIAL COMMONS
PHASE 2A IMPROVEMENTS
NAUGATUCK CONNECTICUT

CIVIL C1
CORNERSTONE PROFESSIONAL PARK, SUITE D-101
43 SHERMAN HILL ROAD
(203) 266-0778
WOODBURY CONNECTICUT

STATE OF CONNECTICUT · CURTIS C. JONES · No. 21208 · LICENSED PROFESSIONAL ENGINEER

DRAWN: BB	APPROVED: CJ
SCALE:	1" = 100'
DATE:	29 JUN 23
PROJ. NO.:	3535
CADD FILE NAME:	3535
DRAWING NO.:	C-3.0

MATCH LINE SHEET C 3.2


PROPOSED SANITARY MAIN TO HAVE MINIMUM 18" VERTICAL CLARENCE FROM EXISTING WATER MAIN
EXISTING SANITARY MAIN TO REMAIN
EXISTING DRAINAGE UTILITY PIT TO BE REMOVED AND FILLED IN. EXISTING DRAINAGE SYSTEM TO BE CONNECTED TO PROPOSED MANHOLE AND MAINTAIN EXISTING DRAINAGE PATTERNS
AREA RESERVED FOR FUTURE USE OF TREATMENT PLANT ±2.0 ACRES
PR. DMH1 RIM: 191.0 (RAISE RIM EL. TO 201.25 FOR PHASE 2A) INV: 186.0
PROPOSED END OF EX. PAVEMENT STA. 16+77, INSTALL 6" BIT. CURB AND 5'W GRASS SHOULDER
REMOVE EX. CB
BLOCK & GROUT EX. PIPE TO SOUTH
BUILDING SETBACK LINE (TYP.)
LANXESS
BUILDING A ACCESS ROAD
EX. WATER LATERAL SIZE UNKNOWN
PROVIDE SILT SACK INSERT ON ALL EXISTING AND PROPOSED CATCH BASINS WITHIN LIMITS OF CONSTRUCTION UNTIL SITE IS STABLIZED.
LIMITS OF CONSTRUCTION
PROPOSED GUARD RAIL(TYP.)
END OF PAVEMENT PHASE 2A
INSTALL PR. 8" SAN. SEWER MAIN TO STA. 7+00 AS PART OF PHASE 2A
INSTALL PR. 8" WATER MAIN TO STA. 7+50 AS PART OF PHASE 2A
BLEND WITH GRAVEL DRIVE TO STA. 9+00 TO EX. HAUL ROAD TO MAINTAIN ACCESS AS PART OF 2A IMPROVEMENTS
PROPOSED SEWER MAIN TO CONNECT TO EXISTING MANHOLE
EXISTING UTILITY/ DRAINAGE PIT TO BE REMOVED
SMH1
SMH2
SMH3
SMH4
DMH1 RIM: 178.0 INV: 162.48
DMH2 RIM: 180.50 INV: 165.00
DMH3 RIM: 183.50 INV: 179.40(15") INV: 174.15
THROUGH ROAD
NEW YORK, NEW HAVEN & HARTFORD RAILROAD
PROPOSED FENCE AND GATE
PR. 60" RCP STORM CROSSING
EXISTING OVERHEAD STEEL TRUSSEL TO BE REMOVED
EXISTING EXTRACTION WELL TO BE REMOVED
PROPOSED FENCE AND GUARD RAIL ALONG TOP OF RETAINING WALL ADJACENT TO EXISTING RAILROAD
PROPOSED NEW FENCE TOP OF BERM ALONG NAUGATUCK RIVER (TYP.)
MON
NAUGATUCK RIVER
EXISTING EXTRACTION WELL TO BE REMOVED
EXISTING BUILDING TO BE REMOVED

LEGEND

- PROPERTY LINE
- MAJOR CONTOUR
- MINOR CONTOUR
- EXISTING CURB LINE
- CHAIN LINK FENCE
- GUARD RAIL
- EXISTING GAS
- EXISTING WATER
- EXISTING SANITARY SEWER
- EXISTING STORM SEWER
- EXISTING CABLE
- EXISTING UNDERGROUND ELECTRIC
- EXISTING OVERHEAD WIRES
- EXISTING GRADING, DRAINAGE OR ACCESS EASEMENT
- EXISTING SANITARY SEWER EASEMENT
- EXISTING WATER EASEMENT
- EXISTING GAS EASEMENT
- CATCH BASIN
- STORM MANHOLE
- SANITARY MANHOLE
- FIRE HYDRANT
- UTILITY POLE
- LIGHT POLE
- WATER VALVE
- GAS VALVE
- TRAFFIC BOX
- PROPOSED CONTOUR
- PROPOSED SPOT GRADE
- PROPOSED STORM STRUCTURE
- PROPOSED STORM SEWER
- PROPOSED LIMITS OF CONSTRUCTION
- PROPOSED SILT FENCE
- PROPOSED TIMBER GUIDE RAIL

NO.	REVISION	DATE
1	GENERAL REVISIONS	17 JUL 23

Previous Editions Obsolete

1 inch = 40 ft.

BOROUGH OF NAUGATUCK
229 CHURCH STREET
NAUGATUCK, CT 06770

CLIENT

GRADING, DRAINAGE & UTILITY PLAN

NAUGATUCK INDUSTRIAL COMMONS
PHASE 2A IMPROVEMENTS

NAUGATUCK — CONNECTICUT

CIVIL 1

CORNERSTONE PROFESSIONAL PARK, SUITE D-101
43 SHERMAN HILL ROAD
(203) 266 - 0778

WOODBURY — CONNECTICUT

STATE OF CONNECTICUT — CURTIS C. JONES — No. 17208 — LICENSED PROFESSIONAL ENGINEER

DRAWN: BB — APPROVED: CJ
SCALE: 1" = 40'
DATE: 29 JUN 23
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DRAWING NO.: C-3.1

PROPOSED WATER LATERAL FOR BUILDING 'C'

PROPOSED SANITARY LATERAL TO BUILDING 'C'

PR. GAS LATERAL

PR. ELECT SERVICE

BUILDING 'C' PAD AREA FOR BUS BUILDING & PARKING =± 2.1 ACRES

PROPOSED BUILDING UNITS

CHERRY STREET EXT.

BUILDING A ACCESS ROAD

PROVIDE SILT SACK INSERT ON ALL EXISTING AND PROPOSED CATCH BASINS WITHIN LIMITS OF CONSTRUCTION UNTIL SITE IS STABLIZED.

DMH8 12+25L
RIM: 232.50
INV: 228.65(15")
INV: 222.80(60")

RIM: 232.00
INV: 228.75

RIM: 232.00
INV: 228.75

DMH7 6+76
RIM: 220.00
INV: 216.15(15")
INV: 211.75(60")

SILT FENCE (TYP.)

LIMITS OF CONSTRUCTION

EXISTING BIT DRIVE TO BE REMOVED

BUILDING SETBACK LINE (TYP.)

PR. ADDITIONAL UTIL. POLES FOR ROAD CLEARANCE, CONTRACTOR TO COORDINATE WITH CL&P

RAISE EX. 12" WATER MAIN TO PROVIDE 4' OF COVER UNDER PR. FINISHED GRADE

DMH6 6+00
RIM: 211.43
INV: 207.40

CL&P #25770 POLE TO BE RESET, CONTRACTOR TO COORDINATE WITH CL&P

EXISTING OVERHEAD ELECTRIC

EX. 12" WATER

EXISTING LANXESS PARKING AREA TO REMAIN

EX CBS AND DMH TO REMAIN, ADJUST RIMS TO FINISHED GRADE

LIMITS OF CONSTRUCTION

PR. END OF NEW PAVEMENT, MATCH EXISTING LOT PAVEMENT

PR. END OF NEW PAVEMENT & MATCH EXISTING PAVEMENT STA 11+30

6 EX. PARKING SPACES TO BE RECONSTRUCTED

100' UPLAND REVIEW AREA

PC: 5+55.63

PR. CB
RIM: 194.00
INV: 189.00

PR. DMH2
RIM: 187.0
INV: 181.6

DMH5 4+51
RIM: 206.50
INV: 202.65(15")
INV: 198.36(60")

RIM: 206.00
INV: 202.75

RIM: 206.00
INV: 202.75

PR. CB1 (PART OF PHASE 1)
RIM: 191.5
INV: 186.5 (PR. 36" RCP-S)
INV: 186.5 (PR. 24" RCP-W)
INV: 186.5 (PR. 15" RCP-E)

PR. 15" HDPE

RIM: 219.50
INV: 216.25

RIM: 219.50
INV: 216.25

EX. 12" WATER

MATCH LINE SHEET C 3.1

MATCH LINE SHEET C 3.3

LEGEND

- PROPERTY LINE
- MAJOR CONTOUR
- MINOR CONTOUR
- EXISTING CURB LINE
- CHAIN LINK FENCE
- GUARD RAIL
- EXISTING GAS
- EXISTING WATER
- EXISTING SANITARY SEWER
- EXISTING STORM SEWER
- EXISTING CABLE
- EXISTING UNDERGROUND ELECTRIC
- EXISTING OVERHEAD WIRES
- EXISTING GRADING, DRAINAGE OR ACCESS EASEMENT
- EXISTING SANITARY SEWER EASEMENT
- EXISTING WATER EASEMENT
- EXISTING GAS EASEMENT
- CATCH BASIN
- STORM MANHOLE
- SANITARY MANHOLE
- FIRE HYDRANT
- UTILITY POLE
- LIGHT POLE
- WATER VALVE
- GAS VALVE
- TRAFFIC BOX
- PROPOSED CONTOUR
- +8.3 PROPOSED SPOT GRADE
- PROPOSED STORM STRUCTURE
- PROPOSED STORM SEWER
- PROPOSED LIMITS OF CONSTRUCTION
- PROPOSED SILT FENCE
- PROPOSED TIMBER GUIDE RAIL

NO.	REVISION	DATE

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40 0 20 40 80

1 inch = 40 ft.

BOROUGH OF NAUGATUCK
229 CHURCH STREET
NAUGATUCK, CT 06770
CLIENT

GRADING, DRAINAGE & UTILITY PLAN

NAUGATUCK INDUSTRIAL COMMONS
PHASE 2A IMPROVEMENTS
NAUGATUCK CONNECTICUT

CIVIL C1
CORNERSTONE PROFESSIONAL PARK, SUITE D-101
43 SHERMAN HILL ROAD
WOODBURY (203) 266 - 0778 CONNECTICUT

STATE OF CONNECTICUT CURTIS C. JONES No. 17208 LICENSED PROFESSIONAL ENGINEER

DRAWN: BB APPROVED: CJ
SCALE: 1" = 40'
DATE: 29 JUN 23
PROJ. NO.: 3535
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DRAWING NO.:

C-3.2

MATCH LINE SHEET C 3.2

CHERRY STREET EXT.

CHERRY STREET

8" SANITARY

PR. ELECT. SERVICE

PR. GAS. LATERAL

BUILDING SETBACK LINE (TYP.)

PR. 60" RCP FROM CHERRY ST. IMPROVEMENTS.

BLOCK EX. 36" PIPE, PART OF PHASE 2A IMPROVEMENTS

LAST MH TO BE INSTALLED AS PART OF CHERRY STREET DRAINAGE PROJECT

DMH (CHERRY ST. PROJECT)
RIM: 252.20
INV: 237.30

EX. SMH
RIM: 258.51
INV: 250.00

FUTURE BUILDING ADDITION
192' X 190'
36,480 SF
FFE = 254.0

BUILDING A
WAREHOUSE
TOTAL WITH
ADDITION = 180,530 SF

BUILDING A
335' X 430'
144,050 SF
FFE = 254.00

LOADING DOCKS +250

END OF PAVEMENT PHASE 2A = STA. 12+43

DMH9 12+25L
RIM: 247.61
INV: 229.80

PROCESSED GRAVEL SURFACE – PHASE 2A

PR. 60" RCP

PROPOSED LANXESS DRIVE

RIM: 237.5
INV: 234.05

RIM: 237.5
INV: 234.25

ABANDON EX. CBS. AT STA. 12+00,TIE 15" HDPE INTO EX. DMH

EXISTING UTILITY SERVICES TO LANXESS TO REMAIN (GAS,

PR. FENCE (TYP.)

PR. LIGHT POLES (TYP.)

PROPOSED LANXESS PARKING AREA

PROPOSED UNDERGROUND DETENTION SYSTEM
152 UNITS OF CULTEC R-150XLHD UNITS
UNIT INV:234.00
BOTT. OF STONE=233.00

ISOLATOR ROW W/ INSPECTION PORTS (TYP.)

PR. END OF NEW PAVEMENT, MATCH EXISTING DRIVE

PR. END OF NEW PAVEMENT, MATCH EXISTING DRIVE

CB3
RIM: 238.00
INV: 234.00

RIM: 238.7
INV: 234.37

RIM: 238.4
INV: 235.08

RIM: 238.30
INV: 234.56

RIM: 238.30
INV: 234.80

O.C.S.1
RIM 238.50
INV: 234.00(IN)
INV: 232.00(OUT)
(SEE DETAIL FOR ORIFICE)

CB2
RIM: 237.78
INV: 234.53

CB4
RIM: 236.00
INV: 232.23

RIM: 239.50
INV: 235.50

6" PVC

LANXESS

BUILDING SETBACK LINE (TYP.)

PROPOSED GUIDE RAIL

PR. LIGHT POLES (TYP.)

LEGEND

- PROPERTY LINE
- MAJOR CONTOUR
- MINOR CONTOUR
- EXISTING CURB LINE
- CHAIN LINK FENCE
- GUARD RAIL
- EXISTING GAS
- EXISTING WATER
- EXISTING SANITARY SEWER
- EXISTING STORM SEWER
- EXISTING CABLE
- EXISTING UNDERGROUND ELECTRIC
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- PROPOSED LIMITS OF CONSTRUCTION
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NO.	REVISION	DATE

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1 inch = 40 ft.

BOROUGH OF NAUGATUCK
229 CHURCH STREET
NAUGATUCK, CT 06770
CLIENT

GRADING, DRAINAGE & UTILITY PLAN

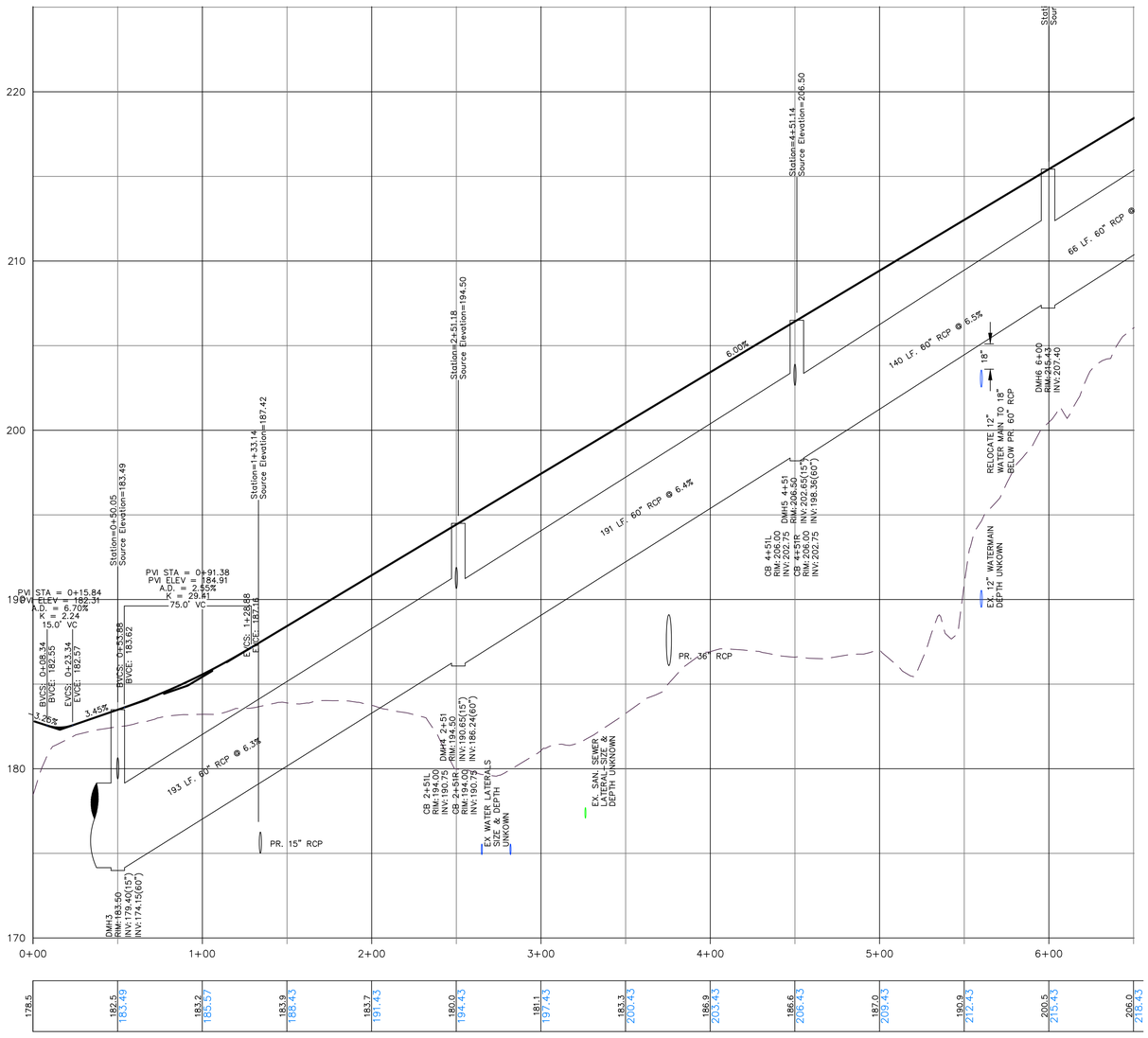
NAUGATUCK INDUSTRIAL COMMONS
PHASE 2A IMPROVEMENTS
NAUGATUCK CONNECTICUT

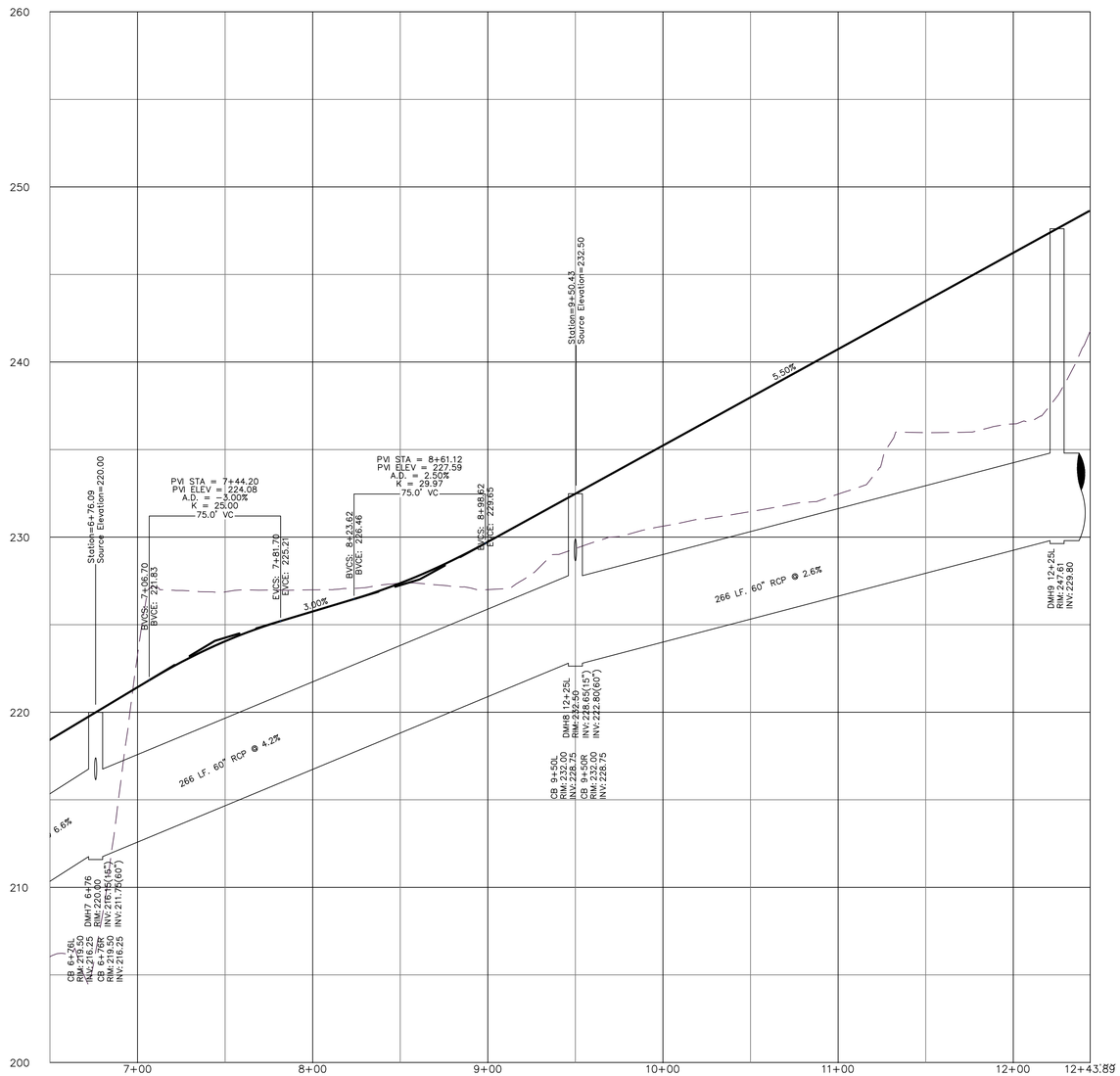
CIVIL 1
CORNERSTONE PROFESSIONAL PARK, SUITE D-101
43 SHERMAN HILL ROAD
(203) 266 - 0778
WOODBURY CONNECTICUT

STATE OF CONNECTICUT · CURTIS C. JONES · No. 17208 · LICENSED PROFESSIONAL ENGINEER

DRAWN: BB APPROVED: CJ
SCALE: 1" = 40'
DATE: 29 JUN 23
PROJ. NO.: 3535
CADD FILE NAME: 3535
DRAWING NO.:

C-3.3





BUILDING A ACCESS ROAD

NO.	REVISION	DATE
1	GENERAL REVISIONS	17 JUL 23

Previous Editions Obsolete

BOROUGH OF NAUGATUCK
229 CHURCH STREET
NAUGATUCK, CT 06770

CLIENT

ROADWAY PROFILES
BUILDING A ACCESS ROAD

NAUGATUCK INDUSTRIAL COMMONS
PHASE 2A IMPROVEMENTS

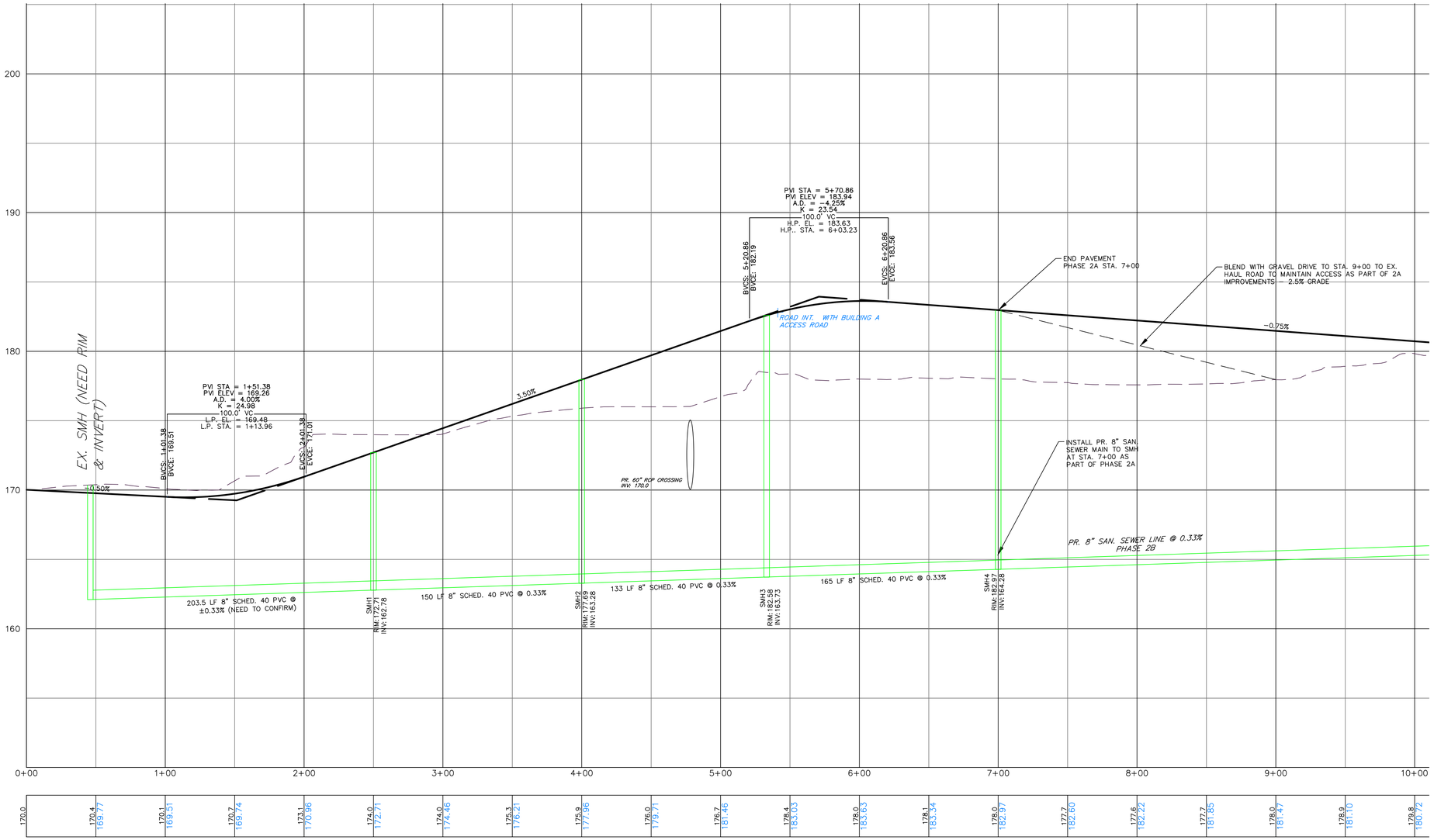
NAUGATUCK CONNECTICUT

CIVIL 1
CORNERSTONE PROFESSIONAL PARK, SUITE D-101
43 SHERMAN HILL ROAD
WOODBURY (203) 266 - 0778 CONNECTICUT

STATE OF CONNECTICUT
CURTIS C. JONES
No. 17206
LICENSED
PROFESSIONAL ENGINEER

DRAWN: BB APPROVED: CJ
SCALE: 1" = 40' HOR.
1" = 40' VER.
DATE: 29 JUN 23
PROJ. NO.: 3535
CADD FILE NAME: 3535
DRAWING NO.:

C-4.1



THROUGH ROAD

NO.	REVISION	DATE
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BOROUGH OF NAUGATUCK
229 CHURCH STREET
NAUGATUCK, CT 06770
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ROADWAY PROFILES
THROUGH ROAD

NAUGATUCK INDUSTRIAL COMMONS
PHASE 2A IMPROVEMENTS
NAUGATUCK CONNECTICUT

CIVIL 1
CORNERSTONE PROFESSIONAL PARK, SUITE D-101
43 SHERMAN HILL ROAD
WOODBURY (203) 266-0778 CONNECTICUT

STATE OF CONNECTICUT · CURTIS C. JONES · No. 27108 · LICENSED PROFESSIONAL ENGINEER

DRAWN: BB APPROVED: CJ
SCALE: 1" = 40' HOR. 1" = 40' VER.
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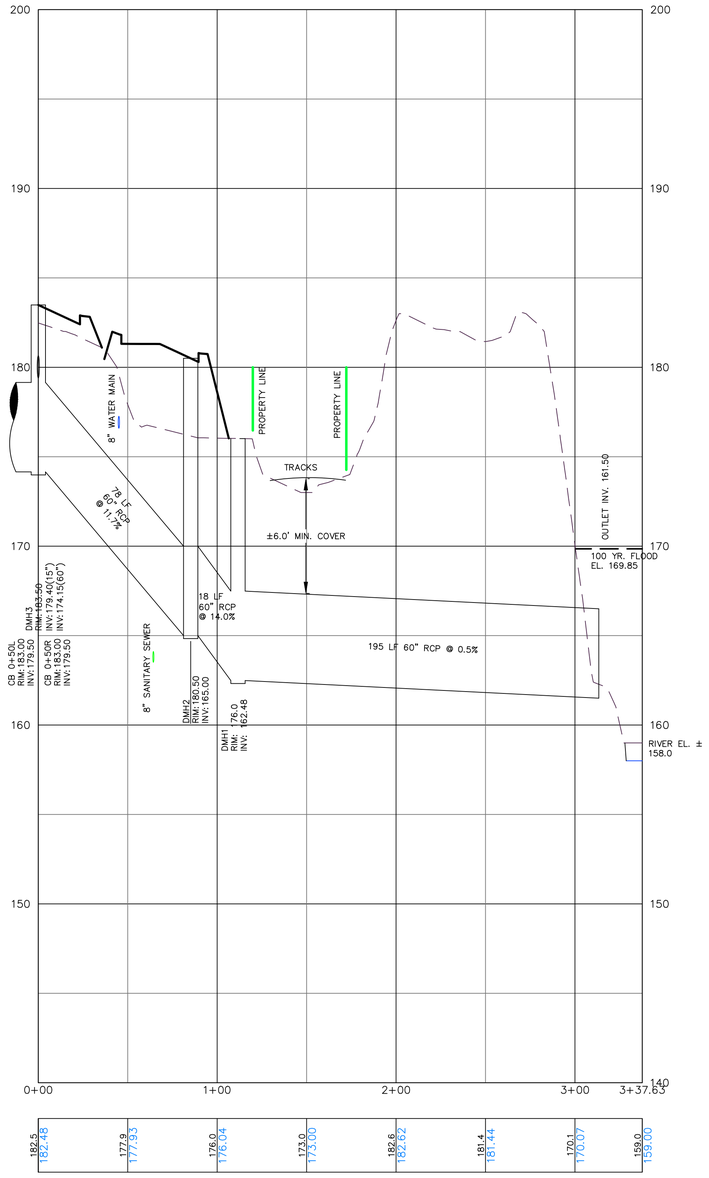
DRAWING NO.: C-4.2



DMH3 TO RIVER

NO.	REVISION	DATE
1	GENERAL REVISIONS	17 JUL 23

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BOROUGH OF NAUGATUCK
229 CHURCH STREET
NAUGATUCK, CT 06770
CLIENT

STORM DRAINAGE PROFILES

NAUGATUCK INDUSTRIAL COMMONS
PHASE 2A IMPROVEMENTS
NAUGATUCK CONNECTICUT

CIVIL 1
CORNERSTONE PROFESSIONAL PARK, SUITE D-101
43 SHERMAN HILL ROAD
WOODBURY (203) 266 - 0778 CONNECTICUT

STATE OF CONNECTICUT · CURTIS C. JONES · No. 17008 · LICENSED PROFESSIONAL ENGINEER

DRAWN: BB APPROVED: CJ
SCALE: 1" = 40' HOR. 1" = 40' VER.
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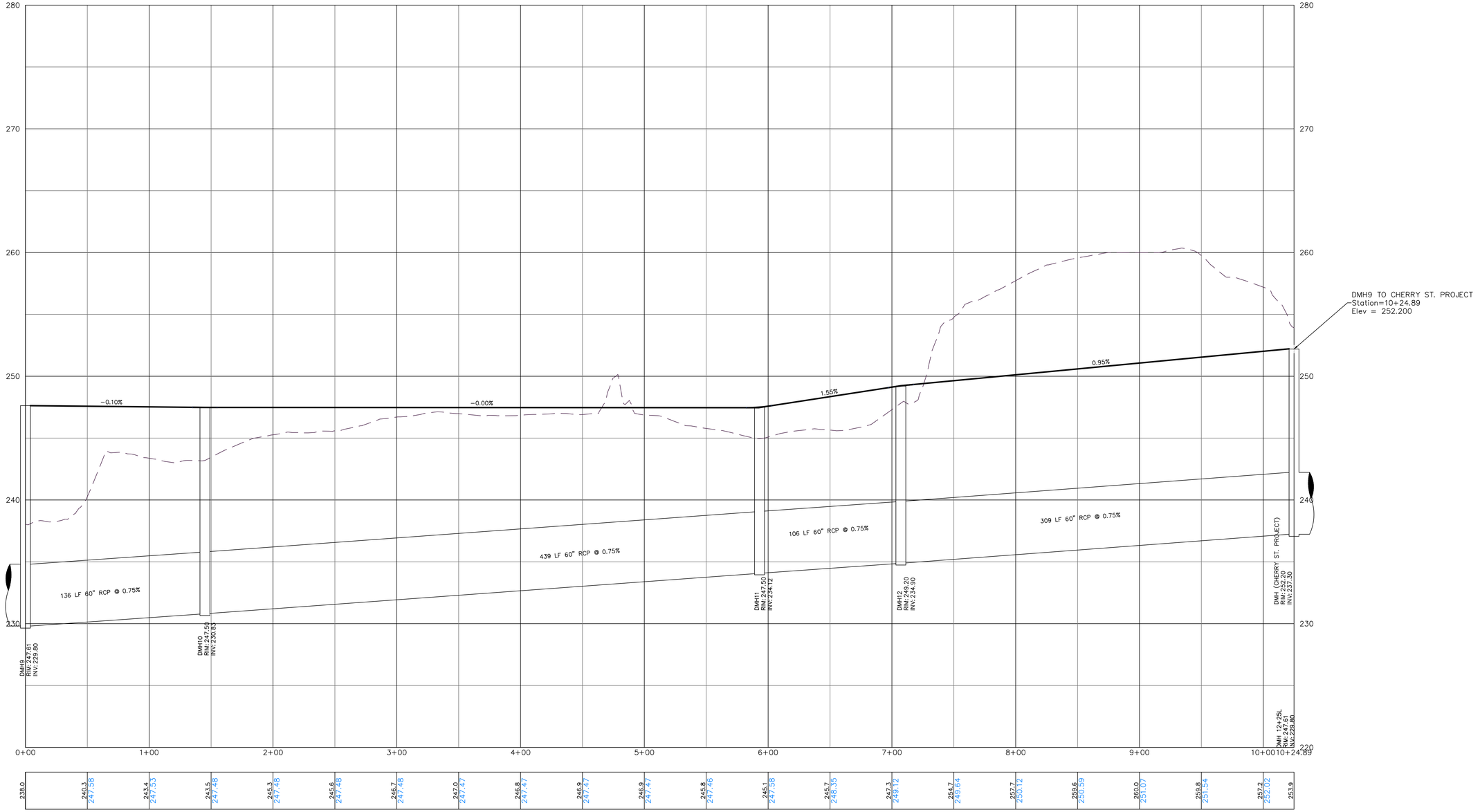

DMH9 TO CHERRY ST. PROJECT

NO.	REVISION	DATE
1	GENERAL REVISIONS	17 JUL 23
	Previous Editions Obsolete	

BOROUGH OF NAUGATUCK
229 CHURCH STREET
NAUGATUCK, CT 06770
CLIENT

STORM DRAINAGE PROFILES

NAUGATUCK INDUSTRIAL COMMONS
PHASE 2A IMPROVEMENTS
NAUGATUCK CONNECTICUT

CIVIL 1
CORNERSTONE PROFESSIONAL PARK, SUITE D-101
43 SHERMAN HILL ROAD
WOODBURY (203) 266 - 0778 CONNECTICUT

STATE OF CONNECTICUT · CURTIS C. JONES · No. 17206 · LICENSED PROFESSIONAL ENGINEER

DRAWN: BB	APPROVED: CJ
SCALE:	1" = 40' HOR. 1" = 40' VER.
DATE:	29 JUN 23
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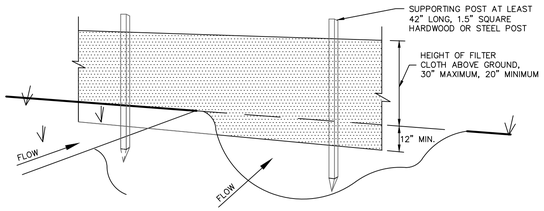
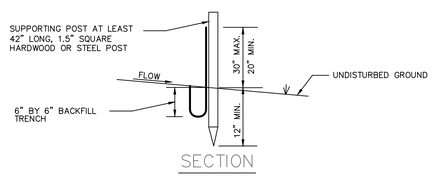
CADD FILE NAME:	3535
DRAWING NO.:	C-4.4



PERSPECTIVE VIEW



SECTION

CONSTRUCTION NOTES FOR SILT FENCE

1. EXCAVATE A TRENCH A MINIMUM OF 6 INCHES DEEP AND 6 INCHES WIDE ON THE UP SIDE OF THE FENCE LOCATION.

2. DRIVE SUPPORT POSTS ON THE DOWN SLOPE SIDE OF THE TRENCH TO A DEPTH OF AT LEAST 12 INCHES INTO ORIGINAL GROUND.

3. STAPLE OR SECURE THE GEOTEXTILE TO THE SUPPORT POSTS PER MANUFACTURER'S INSTRUCTIONS SUCH THAT AT LEAST 6 INCHES OF GEOTEXTILE LIES WITHIN THE TRENCH.

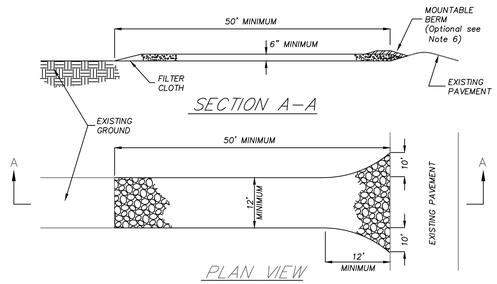
4. BACKFILL THE TRENCH WITH TAMPED SOIL OR AGGREGATE OVER THE GEOTEXTILE.

POSTS: 1.5" SQUARE HARDWOOD OR STEEL

FILTER CLOTH: MIRAFI 100X, ENVIROFENCE OR APPROVED EQUAL

SILT FENCE DETAIL

N.T.S.

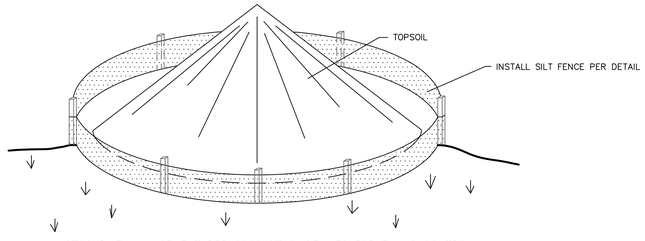


NOTES:

1. *STONE SIZE – USE 1" – 2" STONE, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.*
2. *LENGTH – AS REQUIRED, BUT NOT LESS THAN 50 FEET.*
3. *THICKNESS – NOT LESS THAN SIX (6) INCHES.*
4. *WIDTH – 12 FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS. 24 FOOT MINIMUM IF SINGLE ENTRANCE TO SITE.*
5. *FILTER CLOTH – TO BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE.*
6. *SURFACE WATER – ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED ACROSS THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED.*
7. *MAINTENANCE – THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OF FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS–OF–WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURE USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DRIPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS–OF–WAY MUST BE REMOVED IMMEDIATELY.*
8. *WASHING – WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHTS–OF–WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.*
9. *PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN.*

STABILIZED CONSTRUCTION ENTRANCE

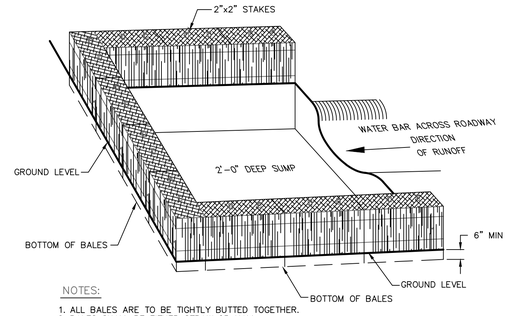
N.T.S.



STOCKPILE MANAGEMENT PER 2002 CT GUIDELINES FOR E & S CONTROL:

1. LOCATE STOCKPILE SO THAT NATURAL DRAINAGE IS NOT OBSTRUCTED.
2. DIVERT RUNOFF WATER AWAY FROM OR AROUND THE STOCKPILE.
3. INSTALL A GEOTEXTILE SILT FENCE AROUND THE STOCKPILE AREA APPROXIMATELY 10 FEET FROM PROPOSED TOE OF THE SLOPE. ALSO INSTALL A STAKED HAY BALE BARRIER ON THE DOWNGRADIENT SIDE OF THE STOCKPILE AREA.
4. THE SIDE SLOPES OF STOCKPILED MATERIAL SHOULD BE NO STEEPER THAN 2:1.
5. STOCKPILES THAT ARE NOT TO BE USED WITHIN 30 DAYS NEED TO BE SEEDED AND MULCHED IMMEDIATELY AFTER FORMATION OF THE STOCKPILE.
6. MAINTAIN AN ADEQUATE SUPPLY OF POLYMER LINE SHALL BE KEPT ON SITE FOR COVERING OF STOCKPILES FOR DUST OR WATER EROSION CONTROL AS NEEDED.
7. AFTER STOCKPILE HAS BEEN REMOVED, THE SITE SHOULD BE GRADED AND PERMANENTLY STABILIZED.

TEMPORARY TOPSOIL STOCKPILE

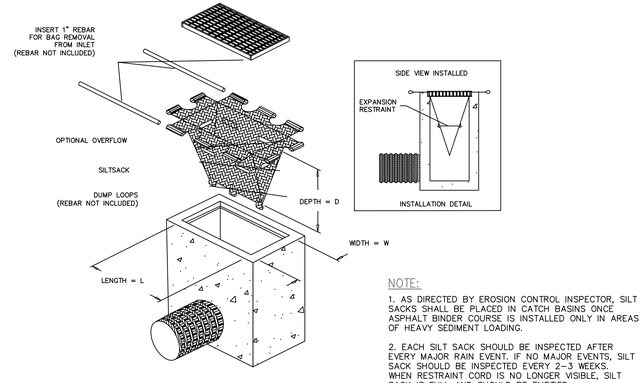


NOTES:

1. ALL BALES ARE TO BE TIGHTLY BUTTED TOGETHER.
2. BALES SHALL BE EITHER STRAW OR HAY.
3. PROVIDE FREQUENT INSPECTION AND MAINTENANCE. REMOVE ACCUMULATED SEDIMENT AND REPLACE CLOGGED BALES TO RESTORE EFFECTIVENESS OF INSTALLATION.

TEMPORARY DIVERSION DITCH WITH HAY BALE TRAP

N.T.S.



NOTE:

1. AS DIRECTED BY EROSION CONTROL INSPECTOR, SILT SACKS SHALL BE PLACED IN CATCH BASINS ONCE ASPHALT BINDER COURSE IS INSTALLED ONLY IN AREAS OF HEAVY SEDIMENT LOADING.

2. EACH SILT SACK SHOULD BE INSPECTED AFTER EVERY MAJOR RAIN EVENT. IF NO MAJOR EVENTS, SILT SACK SHOULD BE INSPECTED EVERY 2–3 WEEKS. WHEN RESTRAINT CORD IS NO LONGER VISIBLE, SILT SACK IS FULL AND SHOULD BE EMPTIED.

SILT SACK DETAIL

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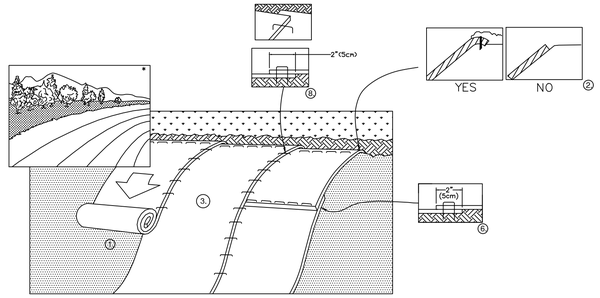
DETAILS

NAUGATUCK INDUSTRIAL COMMONS
PHASE 2A IMPROVEMENTS
NAUGATUCK CONNECTICUT

CIVIL 1
CORNERSTONE PROFESSIONAL PARK, SUITE D-101
43 SHERMAN HILL ROAD
(203) 266 - 0778
WOODBURY CONNECTICUT

DRAWN: BB APPROVED: CJ
SCALE: N.T.S
DATE: 29 JUN 23
PROJ. NO.: 3535
CADD FILE NAME: 3535
DRAWING NO.: C-5.1



INSTALLATION PROCEDURE

1. PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED.
   NOTE: WHEN USING CELL-O-SEED DO NOT SEED PREPARED AREA. CELL-O-SEED MUST BE INSTALLED WITH PAPER SIDE DOWN.
2. START UNROLLING THE FUTERRA F4 NETLESS 1-2' ABOVE THE SLOPE CREST.
3. ANCHOR TOP OF BLANKET ON 1' CENTERS
4. APPLY PINS OR STAPLES ALONG BLANKET LENGTH, ONE EVERY 2.5 LINEAR FEET. PLACE PIN OR STAPLE EVERY EVERY 5' DOWN CENTER OF BLANKET, CREATING AN X PATTERN WITH THE ANCHORING SYSTEM.
5. RAKE LOOSE SOIL OVER TOP EDGE ALONG BLANKET WIDTH. MOUND TO A MIN. HEIGHT OF 4".
6. OVERLAP SHINGLE STYLE A MAX. OF 2". ANCHOR ON 1' CENTER ACROSS THE ROLL WIDTH.
7. UNROLL THE NEXT BLANKET DOWN THE SLOPE.
8. OVERLAP ROLLS A MAX. OF 2". USE ONE PIN OR STAPLE EVERY 5'.

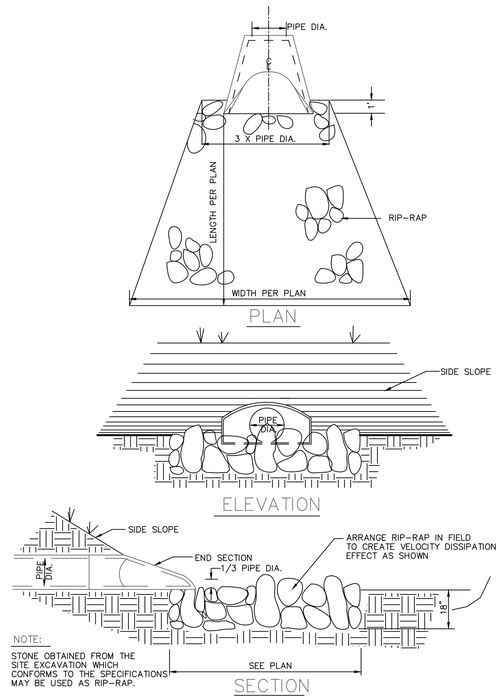
FUTERRA F4 NETLESS EROSION CONTROL BLANKETS
MATERIAL:
THERMALLY REFINED WOOD AND DEGRADABLE MAN-MADE FIBERS

CRITICAL POINTS
A. OVERLAPS AND SEAMS
B. PROJECTED WATER LINE
C. CHANNEL BOTTOM/SIDE SLOPE VERTICES

NOTE
1. HORIZONTAL STAPLE SPACING SHOULD BE ALTERED IF NECESSARY TO ALLOW STAPLES TO SECURE THE CRITICAL POINTS ALONG THE CHANNEL SURFACE.
2. IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENTHS IN EXCESS OF 6" (15 CM) MAY BE NECESSARY TO PROPERLY ANCHOR THE BLANKETS.
3. SLOPE CREST TRENCHING MAY BE SPECIFIED ON SOME PROJECTS. TOP EDGE WIDTH OF THE FUTERRA F4 NETLESS SHOULD THEN BE STAPLED OR STAKED IN THE TRENCH BOTTOM. BACKFILL AND COMPACT SOIL.IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" (15cm) MAY BE NECESSARY TO PROPERLY SECURE THE BLANKETS.
4. FUTERRA F4 NETLESS CAN BE APPLIED HORIZONTALLY ON SHALLOW SLOPES.*

FUTERRA F4 NETLESS EROSION CONTROL BLANKET

N.T.S.



RIP-RAP APRON/ENERGY DISSIPATOR

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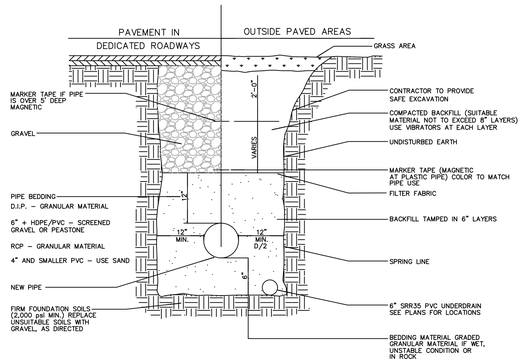

TYPICAL GRAVITY PIPE TRENCH

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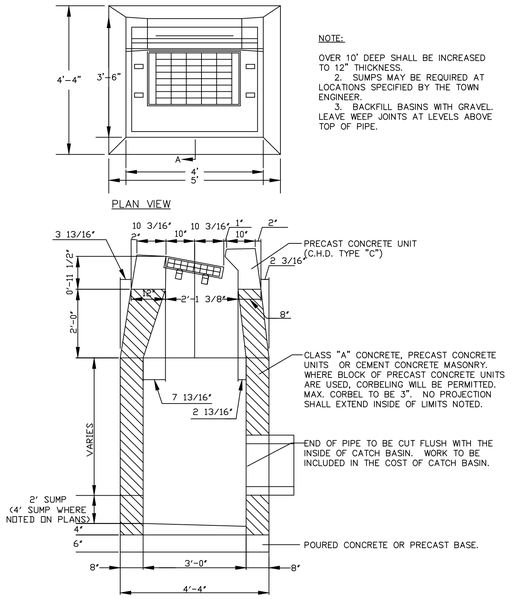


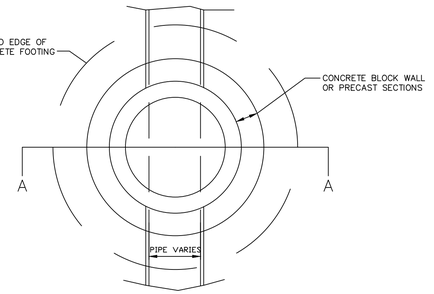
NOTE:

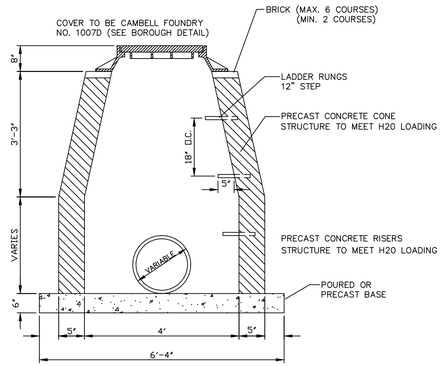
OVER 10' DEEP SHALL BE INCREASED TO 12" THICKNESS.
2. SUMPS MAY BE REQUIRED AT LOCATIONS SPECIFIED BY THE TOWN ENGINEER.
3. BACKFILL BASINS WITH GRAVEL. LEAVE WEEP JOINTS AT LEVELS ABOVE TOP OF PIPE.

SECTION A-A

STANDARD TYPE "C" CATCH BASIN

N.T.S.





SECTION A-A

CONTRACTOR TO PROVIDE SHOP DRAWINGS FOR ALL DRAINAGE STRUCTURES FOR REVIEW BY DESIGN ENGINEER PRIOR TO INSTALLATION

DRAINAGE MANHOLE

without sump

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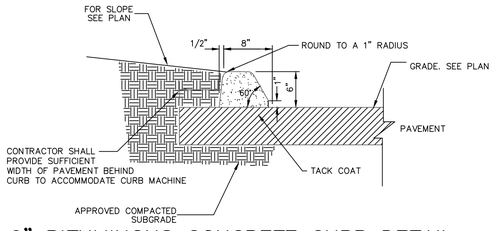
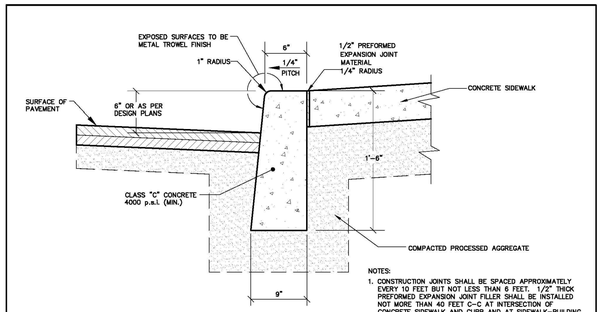
CIVIL 1
CORNERSTONE PROFESSIONAL PARK, SUITE D-101
43 SHERMAN HILL ROAD
WOODBURY (203) 266 - 0778 CONNECTICUT

DRAWN: BB APPROVED: CJ
SCALE: N.T.S
DATE: 29 JUN 23
PROJ. NO.: 3535
CADD FILE NAME: 3535
DRAWING NO.: C- 5.2

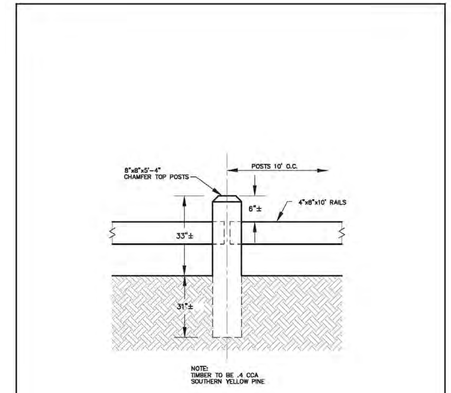


6" BITUMINOUS CONCRETE CURB DETAIL



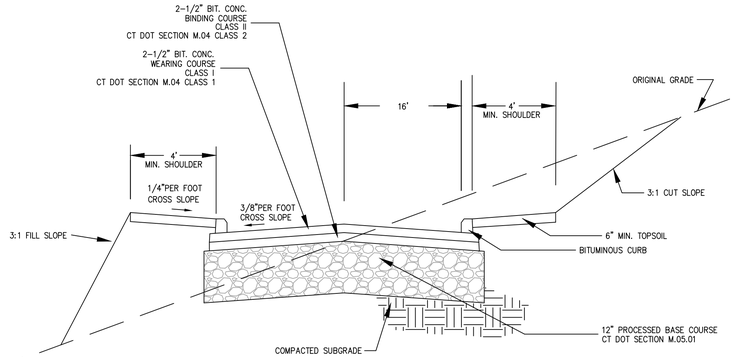
NOTES:
1. CONSTRUCTION JOINTS SHALL BE SPACED APPROXIMATELY EVERY 10 FEET BUT NOT LESS THAN 6 FEET. 1/2" THICK PREFORMED EXPANSION JOINT FILLER SHALL BE INSTALLED NOT MORE THAN 40 FEET C-C AT INTERSECTION OF CONCRETE SIDEWALK AND CURB AND AT SIDEWALK-BUILDING INTERFACE.
2. FORMWORK SHALL REMAIN IN PLACE FOR 24 HOURS FOLLOWING CONCRETE POURING.

BOROUGH OF NAUGATUCK ENGINEERING DEPARTMENT STANDARD DETAIL 229 Church Street, Naugatuck, CT 06770 www.naugatuck-ct.gov	CAST-IN-PLACE CONCRETE CURB	Scale: NTS Drawing No. SD-4 Date:10/2011



NOTE:
TIMBER TO BE .4 CCA SOUTHERN YELLOW PINE

BOROUGH OF NAUGATUCK ENGINEERING DEPARTMENT STANDARD DETAIL 229 Church Street, Naugatuck, CT 06770 www.naugatuck-ct.gov	TIMBER GUIDERAIL	Scale: NTS Drawing No. SD-63 Date:10/2011



NOTES:

1. SUBGRADE & SUBBASE SHALL BE 36' WIDE.
2. PAVEMENT SHALL BE 35' WIDE.
3. TRAVELLED WAY CURB TO CURB SHALL BE A MINIMUM OF 36' WIDE.

TYPICAL ROADWAY CROSS SECTION

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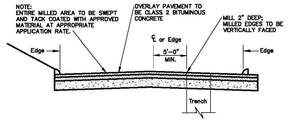
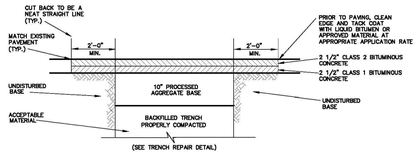
PROJ. NO.:	3535
CADD FILE NAME:	3535
DRAWING NO.:	C- 5.3



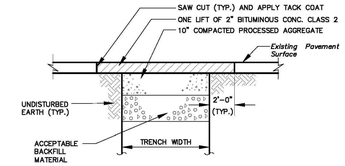
ROAD PAVING WITHIN LAST 8 YEARS



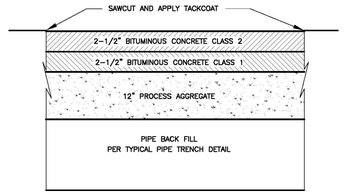
ROAD PAVING OVER 8 YEARS OLD

NOTES:
ACCEPTABLE MATERIAL COMPACTED IN LIFTS NOT TO EXCEED 12" WITH 95% COMPACTION FOR EACH LIFT.
24" LIFTS MAY BE APPROVED IF COMPACTED BY HOE-PACK WITH 95% COMPACTION FOR EACH LIFT.
COMPACTION TO MEET 95% MODIFIED PROCTOR DENSITY REQUIREMENTS.
COMPACTION TESTS MAY BE REQUIRED PER INSPECTOR. ALL COSTS FOR COMPACTION TESTS TO BE BORNE BY CONTRACTOR.

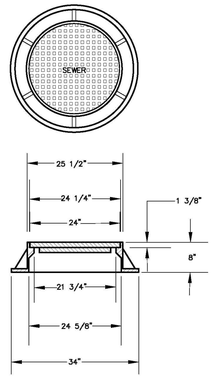
BOROUGH OF NAUGATUCK CONNECTICUT	PERMANENT PAVEMENT REPAIR IN BOROUGH STREET BOROUGH OF NAUGATUCK ENGINEERING DEPARTMENT STANDARD DETAIL 229 Church Street, Naugatuck, CT 06770 www.naugatuck-ct.gov	Scale: NTS Drawing No. SD-2 Date:10/2011



BOROUGH OF NAUGATUCK CONNECTICUT	TEMPORARY PAVEMENT REPAIR IN BOROUGH STREET BOROUGH OF NAUGATUCK ENGINEERING DEPARTMENT STANDARD DETAIL 229 Church Street, Naugatuck, CT 06770 www.naugatuck-ct.gov	Scale: NTS Drawing No. SD-3 Date:10/2011

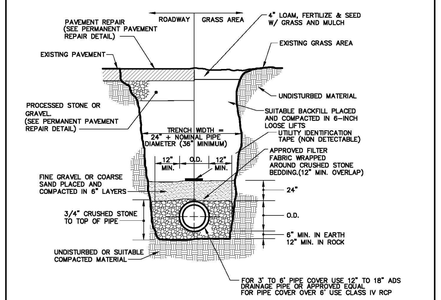


BOROUGH OF NAUGATUCK CONNECTICUT	TRENCH REPAIR – BOROUGH STREETS BOROUGH OF NAUGATUCK ENGINEERING DEPARTMENT STANDARD DETAIL 229 Church Street, Naugatuck, CT 06770 www.naugatuck-ct.gov	Scale: NTS Drawing No. SD-51 Date:10/2011



CAMPBELL CONSTRUCTION CASTINGS
PATTERN NO. 1007D
HEAVY DUTY MANHOLE FRAME AND COVER

BOROUGH OF NAUGATUCK CONNECTICUT	HEAVY DUTY MANHOLE FRAME AND COVER BOROUGH OF NAUGATUCK ENGINEERING DEPARTMENT STANDARD DETAIL 229 Church Street, Naugatuck, CT 06770 www.naugatuck-ct.gov	Scale: NTS Drawing No. SD-8 Date:10/2011



NOTES:
1) ALL PIPE SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF SEWER AND DRAINAGE PIPES AND OTHER GRAVITY FLOW APPLICATIONS.
2) ALL TRENCH WORK TO BE SUPPORTED AS REQUIRED.

BOROUGH OF NAUGATUCK CONNECTICUT	TYPICAL PIPE TRENCH BOROUGH OF NAUGATUCK ENGINEERING DEPARTMENT STANDARD DETAIL 229 Church Street, Naugatuck, CT 06770 www.naugatuck-ct.gov	Scale: NTS Drawing No. SD-11 Date:10/2011

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43 SHERMAN HILL ROAD
WOODBURY (203) 266 - 0778 CONNECTICUT

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EROSION CONTROL NARRATIVE

GENERAL PRINCIPLES
The following general principles shall be maintained as effective means of minimizing erosion and sedimentation during the development process.

Stripping away of vegetation, regrading or other development shall be done in such a way as to minimize erosion.

Grading and development plans shall preserve important natural features, keep cut and fill operations to a minimum, and insure conformity with topography so as to create the least erosion potential and adequately handle the volume and velocity of surface water runoff.

Whenever feasible, natural vegetation shall be retained, protected and supplemented wherever indicated on the site development plan.

The disturbed area and the duration of exposure shall be kept to a practical minimum.

Disturbed soils shall be stabilized as quickly as possible.

Land disturbance will be kept to a minimum. Restabilization will be scheduled as soon as practical, not more than 5 acres will be disturbed at any one time.

Temporary vegetation and/or mulching shall be used to protect exposed critical areas during development when expected to be exposed in excess of 30 days.

The permanent (final) vegetation and mechanical erosion control measures shall be installed as soon as practical during construction.

Sediment in the runoff water shall be trapped until the disturbed areas is stabilized by the use of debris basins, sediment basins, silt traps or similar measures.

All lots, tracts or developments shall be finally graded to provide proper drainage away from buildings and dispose of it without ponding; and all land within a development shall be graded to drain and dispose of surface water without ponding.

Where drainage swales are used to divert surface waters away from buildings, they shall be sodded or planted.

Concentration of surface runoff shall be only permitted by piping and/or through drainage swales or natural watercourses.

Catch basins will be protected with haybale filters throughout the construction period and until all disturbed areas are thoroughly stabilized.

Haybale filters will be installed at all outlets and along the toe of slope of all critical cut and fill slopes.

All control measures will be maintained in effective condition throughout the construction period.

Aadditional control measures will be installed during construction if necessary or required.

Excavation and Fills ––

Slopes created by cuts or fills shall not be steeper than 2:1 and shall be restabilized by temporary or permanent measures, as required during the development process.

Adequate provisions shall be made to prevent surface water from damaging the cut face of excavations or the sloping surfaces of fills.

Cut and fills shall not endanger adjoining property.

All fills shall be compacted to provide stability of material and to prevent undesirable settlement. The fill shall be spread in a series of layers each not exceeding twelve (12) inches in thickness and shall be compacted by a sheep roller or other approved method after each layer is spread.

Fills shall not encroach on natural watercourses, constructed channels or regulated flood plain areas, unless permitted by license or permit from authority having jurisdiction.

Fills placed adjacent to natural watercourses, constructed channels or flood plains shall have suitable protection against erosion during periods of flooding.

Grading shall not be done in such a way as to divert water onto the property of another landowner without their express written consent.

During grading operations, necessary measures for dust control shall be exercised.

Sedimentation and erosion control shall be implemented in accordance with the Guidelines for Soil Erosion and Sediment Control (2002) – State of Connecticut DEP Bulletin 34.

POST CONSTRUCTION MAINTENANCE PLAN FOR STORM DRAINAGE SYSTEM

CATCH BASINS AND STORM PIPING:

Annual:
Catch basins and storm drainage piping will be inspected on an annual basis. Any floatables, trash, debris or sediment build up shall be removed by a licensed contractor.

RESPONSIBILITY:
The land owner will be responsible for the long term maintenance of the storm drainage system as listed above. Maintenance reports indicating that the system has been maintained in accordance with the intent of the plan shall be submitted to the Town Land Use Offices on a semi–annual basis after the maintenance & inspections have occurred.

EARTHWORK EXCAVATION & PROCESSING NOTES

1. All earth excavation and removal operations shall be in conformance with Borough of Naugatuck regulations and ordinances, specifically section 42 of the Zoning Regulations.
2. The excavation contractor shall notify Call Before You Dig at 1–800–922–4455 at least 2 days prior to commencing earth removal activities.
3. The project will be constructed simultaneously with phase 2B. phases 2A and 2B are anticipated to require approximately 24,467 cubic yards of net fill which will be obtained from phase 1 and borrow areas as needed from phase 3.
4. The proposed hours of operation for earth removal and processing activities shall be between 8 AM and 4 PM, Monday thru Friday. No processing equipment, excluding soil screeners shall be located within 150' of a street line, wetland or watercourse or within 300' of an adjoining property line.
5. On–site processing equipment shall consist of portable stone–crushing machine with spray bar and soil screening machinery.
6. Provisions for proper dust control shall be made including water suppression should dust become evident during excavation and processing.
7. Refer to additional requirements, documentation and reports prepared by the licensed environmental professional (LEP), Woodard & Curran for additional requirements for handling, stockpiling testing and capping of impacted materials during earthwork operations.

CONSTRUCTION SEQUENCE

THE SEQUENCE OF CONSTRUCTION WILL BE AS FOLLOWS:

Field stakeout the limits of all construction activities.

Haybales and/or siltation fence and other erosion control features will be placed as shown on the enclosed plan prior to the start of any construction.

Remove stumps and vegetation from the area of construction.

Install the stabilized construction entrance as shown on the plan. At the end of each working day any accumulated silt shall be swept from the existing town roads.

Install temporary sediment traps as necessary during construction.

Strip and stockpile topsoil and subsoil material at the locations shown on the plans.

Install drainage starting at 60" outlet and working west into the site. This includes the required ungerground crossing of the railroad tracks.

The cuts and fills will be made and all slopes loamed, seeded and mulched.

Install underground utilities on proposed roadway as mass excavation progresses to the appropriate elevation.

Haybales shall be placed around the catch basins to stop silt from entering the drainage system. The gravel around the catch basin rim shall be graded to ensure that no water enters the catch basin until pavement is installed. Use additional water bars to divert surface runoff away from catch basins, if necessary. The haybales around the catch basins shall be kept in place until the road is paved and the area has sufficient ground cover to control erosion.

Haybale sediment check dams will be installed if necessary to control lateral runoff along both sides of the proposed road prior to paving.

Provide temporary seeding measures on all exposed soils which were damaged due to construction activities and are not to be permanently restored or are outside of construction traffic zones for a period in access of 30 days.

Seed all disturbed areas.

Clean all silt from drainage structures.

The starting time for the construction is unknown, however the time limit for the site construction is approximately 180 days.

The following general specifications will also be adhered to:

Land disturbance will be kept to a minimum. Restabilization will be scheduled as soon as practical.

Haybale filters will be installed at all culvert outlets and along the toe of all critical cut and fill slopes.

Culvert discharge areas will be protected with riprap channels. Energy dissipaters will be provided as necessary.

Catch basins will be protected with haybale filters throughout the construction period and until all disturbed areas are thoroughly stabilized.

Erosion and sediment control measures will be installed prior to construction whenever possible.

All control measures will be maintained in effective condition throughout the construction period.

Additional control measures will be installed during construction if necessary or required.

RESPONSIBILITY FOR THE PLAN

The responsibility for implementing and maintaining the Erosion and Sedimentation Control Plan rests with the CONTRACTOR, where any development of the parcel gives cause to erosion and sedimentation. It is also to be said that the CONTRACTOR shall be held responsible for informing all concerned regarding responsibility of the plan and seeing that the plan becomes a part of the deed in the event the title of the property is transferred. The costs of all drainage, erosion and sedimentation control measures will therefore rest with the CONTRACTOR.

Whenever sedimentation is caused by stripping vegetation and/or grading, it shall be the responsibility of the person, corporation or other entity having responsibility to remove sedimentation from all lower properties, drainage systems and watercourses and to repair any damage at their expense as quickly as possible.

Maintenance of all drainage facilities and watercourses within any land development shall be the responsibility of the CONTRACTOR until they are accepted by the Town. All control measures will be maintained in effective condition throughout the construction period. Surface inlets shall be kept open and free of sediment and debris. The system shall be checked after every major storm and sediment shall be disposed of at an approved location consistent with the plan.

It shall be the responsibility of any person, corporation or other entity engaging in any act on or near any stream, watercourse or swale or upon the flood plain or right–of–way thereof to maintain as nearly as possible in its present state that same stream, watercourse, swale, flood plain or right–of–way for the duration of the activity and to return it to its original or equal condition after such activity is completed.

Maintenance of drainage facilities or watercourses originating and completely on private property shall be the responsibility of the CONTRACTOR to their point of open discharge at the property line or at a communal watercourse within the property.

No person, corporation or other entity shall block, impede the flow of, alter, construct any structure or deposit any material or thing or commit any act which affects normal or flood flow in any communal stream or watercourse without having obtained prior approval from the Town.

An adequate right–of–way and/or easement shall be provided for all drainage facilities and watercourses which are proposed either for acceptance by the Town or provided by other property owners for the convenience of the CONTRACTOR.

IN CASE OF AN EMERGENCY (e.g. severe flooding, rains, or other environmental problems):
THE PARTY RESPONSIBLE AND THE TOWN'S WETLAND ENFORCEMENT AND TOWN ENGINEER OFFICER SHALL BE NOTIFIED.

SEEDING AND PLANTING REQUIREMENTS

Seedbed Preparation
Fine grade and rake surface to remove stones larger than 2" in diameter. Install needed erosion control devices such as surface water diversions. Grade stabilization structures, sediment basins or drainage channels to maintain grassed areas. Apply limestone at a rate of 2 tons/Ac. or 90 lbs/1000 SF unless otherwise required according to soil test results. Apply fertilizers with 10–10–10 at a rate of 300 lbs./Ac. or 7.5 lbs/1000 SF. At least 50% of the nitrogen shall be from organic sources. Work lime and fertilizer into soil uniformity to a depth of 4" with a whisk, springtooth harrow or other suitable equipment following the contour lines.

Seed Application
Apply grass mixtures at rates specified by hand, cyclone seeder or hydroseeder. Increase seed mixture by 10% if hydroseeder is used. Lightly drag or roll the seeded surface to cover seed. Seeding for selected fine grasses should be done between April 1 and June 1 or between August 15 and October 15. If seeding cannot be done during these times, repeat mulching procedure below until seeding can take place or seed with a quick germinating seed mixture to stabilize slopes. A quick germinating seed mixture (Domestic Rye) can be applied between June 15 through August 15 as approved by the Engineer.

Mulching
Immediately following seeding, mulch the seeded surface with straw, hay or wood fiber at a rate of 1.5 to 2 tons/Ac. except as otherwise specified elsewhere. Mulches should be free of weeds and coarse matter. Spread mulch by hand or mulch blower. Punch mulch into soil surface with track machine or disk harrow set straight up. Mulch material should be "tucked" approximately 2– 3" into the soil surface. Chemical mulch binders or netting, in combination with the straw, hay or wood fibers, will be used where difficult slopes do not allow harrowing by machines.

Grass Seed Mixtures

Temporary Covers		Permanent Covers	
Perennial ryegrass 20 lbs/Ac.		Creeping Red Fescue	40 lbs/Ac.
Annual ryegrass 20 lbs/Ac.		Canada Bluegrass	20 lbs/Ac.

NOTE: ANY PROPOSED PLANTINGS ON SITE SHALL BE NATIVE, NON–INVASIVE SPECIES.

LITTER CONTROL NOTES

As a condition of an inland wetlands permit, all commercial/industrial establishments in close proximity to a wetland or watercourse, shall establish a litter control program, to include litter cleanup encompassing the entire site, both paved and vegetated areas, and such clean–up shall be performed on a weekly basis and further any storm water control structures such as catch basins, sumps, vortechnic units, oil & water separators, retention/detention ponds, level spreaders, etc. shall be cleaned and inspected on an annual basis. A signoff sheet will be established and kept current which shall include the date and time of the litter pickup and the signature of the person performing the cleanup. This signoff sheet will be available to Inland Wetlands staff, Commissioners, and their agents.

EMERGENCY SPILL PLAN

A spill is defined in the Connecticut General Statute 22a– 452c. For practical purposes, any oil or petroleum products, chemical or waste that is released in any manner constitutes a spill. In the event of an emergency spill, the following steps shall be taken:
1. Contact the State of Connecticut Department of Environmental Protection Oil & Chemical Spill Response Division at (860) 424– 3338 immediately.
2. Contact the Mayor's office in Naugatuck at 203–720–7000.
3. The spill shall be contained immediately.

NO.	REVISION	DATE
1	GENERAL REVISIONS	17 JUL 23
	Previous Editions Obsolete	

BOROUGH OF NAUGATUCK
229 CHURCH STREET
NAUGATUCK, CT 06770
CLIENT

EROSION CONTROL NARRATIVE & PROJECT NOTES

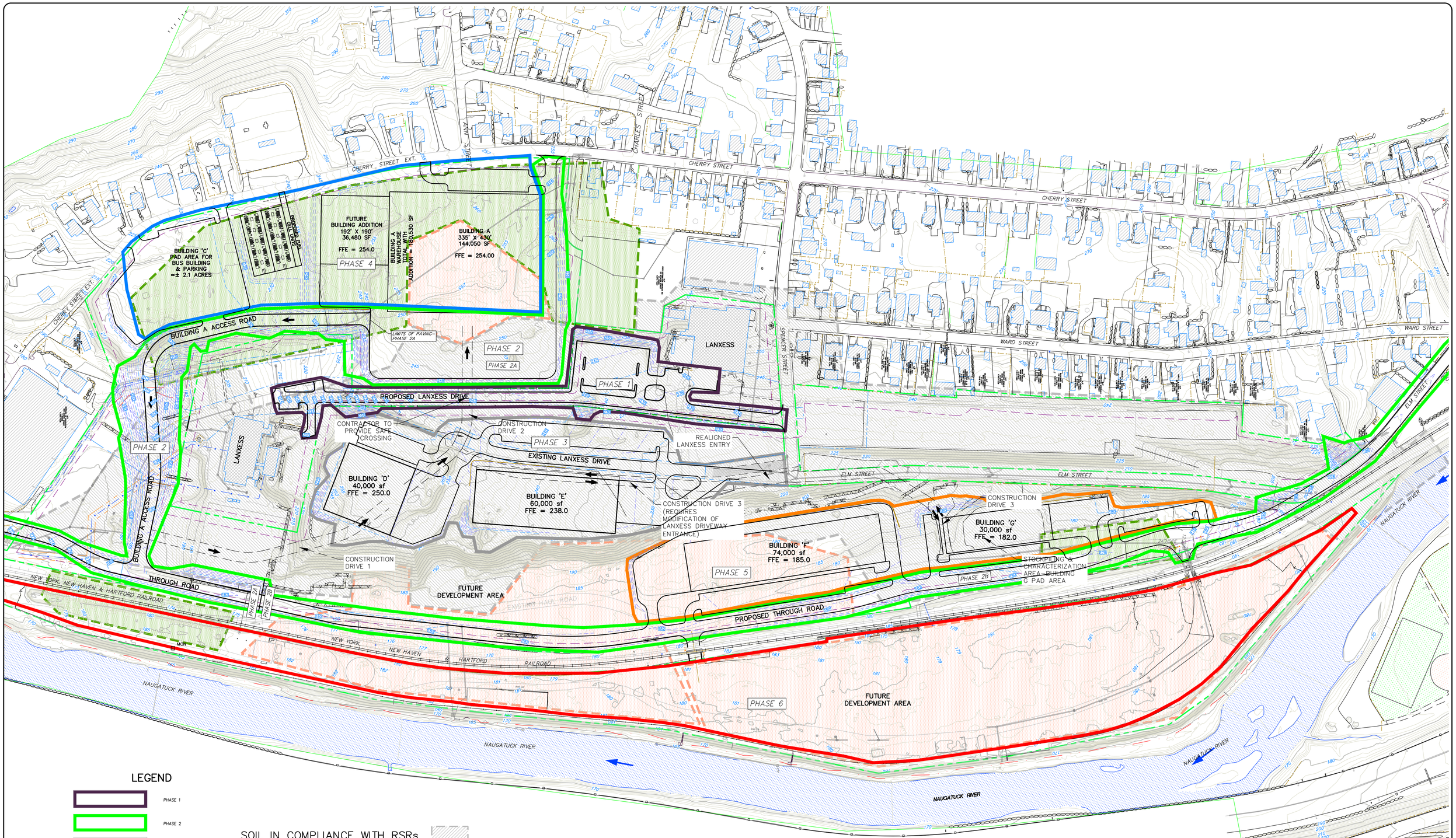
NAUGATUCK INDUSTRIAL COMMONS
PHASE 2A
LANXESS SITE IMPROVEMENTS
NAUGATUCK CONNECTICUT

CIVIL 1
CORNERSTONE PROFESSIONAL PARK, SUITE D-101
43 SHERMAN HILL ROAD
WOODBURY (203) 266 - 0778 CONNECTICUT

STATE OF CONNECTICUT · CURTIS C. JONES · No. 17208 · LICENSED PROFESSIONAL ENGINEER

DRAWN: BB	APPROVED: CJ
SCALE:	AS NOTED
DATE:	29 JUN 23
PROJ. NO.:	3535
CADD FILE NAME:	3535
DRAWING NO.:	C-6.0

Attachment B



LEGEND

- PHASE 1
- PHASE 2
- PHASE 3
- PHASE 4
- PHASE 5
- PHASE 6

SOIL IN COMPLIANCE WITH RSRs

SOIL THAT REQUIRES WORK TO ACHIEVE COMPLIANCE WITH RSR NOT NECESSARY TO BE CAPPED – COVER ONLY

SOIL THAT REQUIRES ACTIVE MANAGEMENT –CONSOLIDATION UNDER LINERS, UNDER BUILDINGS OR CAP

SCALE: 1"=100'

PHASE	DESCRIPTION	SOILS IN COMPLIANCE WITH RSRs CUT	SOILS IN COMPLIANCE WITH RSRs FILL	SOILS THAT REQUIRE WORK – COVER ONLY CUT	SOILS THAT REQUIRE WORK – COVER ONLY FILL	SOILS THAT REQUIRE ACTIVE MANAGEMENT CUT	SOILS THAT REQUIRE ACTIVE MANAGEMENT FILL	TOTAL EARTHWORK PER PHASE CUT	TOTAL EARTHWORK PER PHASE FILL	TOTAL EARTHWORK PER PHASE NET EARTHWORK (CY)	POTENTIAL SOIL ISOLATION VOLUMES (CY) *
1	LANXESS ROAD & PARKING	10,058	703	–	–	–	–	10,058	703	9,355 CUT	
2	CONNECTOR ROADS	9,625	30,662	7,738	6,277	4,429	2,486	22,857	44,324	21,467 FILL	
3	BUILDINGS D & E	49,047	4,095	–	–	–	–	49,047	4,095	44,952 CUT	58,000
4	BUILDINGS A/B, C & FUEL CELL AREA	–	–	19,969	26,007	10,814	227	33,261	26,608	6,653 CUT	
5	BUILDINGS F & G	10,174	7,360	50	494	14348	2,251	27,880	10,612	17,288 CUT	26,000
6	PORT AREA	–	–	–	–	–	–	—	–	–	110,000
TOTAL										56,781 CUT	194,000

*VOLUMES ASSUME 10' UNDERCUT IN BUILDING AREAS, 5' UNDERCUT IN PAVED AREAS, 5' DEPTH OF FILL IN PHASE 6 AREA

NO.	REVISION	DATE
1	CONSTRUCTION DRIVES ADDED	14 JUL 22
2	STOCKPILE LOCATION ADDED	15 JUL 22
3	REVISED PER CURRENT LAYOUT	19 JUN 23
4	REVISED 2A/2B DELINEATION	31 JUL 23
	Previous Editions Obsolete	

100 0 50 100 200

1 inch = 100 ft.

BOROUGH OF NAUGATUCK
229 CHURCH STREET
NAUGATUCK, CT 06770
CLIENT

PRELIMINARY SOIL MANAGEMENT PLAN

NAUGATUCK INDUSTRIAL COMMONS
NAUGATUCK CONNECTICUT

CIVIL 1
CORNERSTONE PROFESSIONAL PARK, SUITE D-101
43 SHERMAN HILL ROAD
(203) 266-0778
WOODBURY CONNECTICUT

DRAWING: BB APPROVED: CJ
SCALE: 1" = 100'
DATE: 31 MAY 22
PROJ. NO.: 3535
CADD FILE NAME: 3535
DRAWING NO.: SMP

Attachment C

MATERIALS MANAGEMENT PLAN

Remediation Activities and Site Redevelopment - Former Uniroyal Chemical Facility

280 Elm Street and 18 Spencer Street
Naugatuck, CT

Middlesex Corporate Center
213 Court Street | 4th Floor
Middletown, Connecticut 06457
800.426.4262

woodardcurran.com

LANXESS Corporation & Borough of Naugatuck
July 2023

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Appendix

1. INTRODUCTION AND BACKGROUND

1.1 Introduction

Woodard & Curran, Inc. (W&C) has prepared this Materials Management Plan (MMP) for soil management related to the redevelopment of the 86.62-acre properties located at 280 Elm Street and 12 Spencer Street, Naugatuck, Connecticut (herein referred to as the "Site"). This MMP will remain in effect until the site remediation is complete and will apply to any parcels created due to the subdivision of the Site. A Site Location Map is included as **Figure 1**. A portion of the Site was transferred to the Borough of Naugatuck (BON) from LANXESS Corporation (LANXESS) on August 18, 2022 (Lot 1A and Lot 3 as shown on **Figure 2**). As a condition of the transaction, Stewardship Permit (DEEP/REM/SP/2022-5030) identifying LANXESS and BON jointly as permittees was approved and issued by the Commissioner of the Department of Energy and Environmental Protection (CTDEEP). A portion of the Site was retained by LANXESS, referred to as the "Retained Land" (Lot 1B as shown on **Figure 2**), and is located at 12 Spencer Street in Naugatuck, CT. A separate Stewardship Permit (DEEP/REM/SP/2022-5030-2) was assigned to LANXESS for the Lot 1B parcel. The Stewardship Permits require that remedial activities are implemented at the Site to meet the applicable criteria established in the Remediation Standard Regulations (RSRs) and establish the long-term requirements of LANXESS and BON.

The MMP establishes the management procedures and practices that will apply to soil excavated from the Site for the purpose of remediation and/or redevelopment. The methods contained in this document are consistent with the General Permit for Contaminated Soil and/or Sediment, expired September 19, 2018 (the Contaminated Soil GP), included as **Appendix A**. The MMP is being submitted concurrently with the Remedial Action Plan (RAP) and a Quality Assurance Project Plan (QAPP). Remedial activities are proposed in the RAP and will be conducted in a phased approach that will generally coincide with the redevelopment plans for the Site.

1.2 Objective

The requirements and procedures described in this document address the management of soil excavated from the Site as part of redevelopment and remediation activities. This document provides procedures for minimizing risks to human health and the environment while excavating and conducting other subsurface activities at the Site. The management practices described in the MMP are consistent with applicable CTDEEP regulations and the best management practices described in Section 5 of the Contaminated Soil GP, which is provided as **Appendix A**.

All Contractors conducting work at the Site shall be familiar with and responsible for implementing the practices described in the MMP and must review the MMP prior to the commencement of excavation activities. The MMP should be made available as a reference to all subcontractors working at the Site. It is the responsibility of the Contractor to ensure that these documents are reviewed and understood by any employee and subcontractor who conducts subsurface work at the Site.

The soil management procedures outlined herein are required for all subsurface work at the Site. This document is not an Occupational Safety and Health Administration (OSHA) health and safety plan. All Contractors shall prepare a Site-Specific Health and Safety Plan (HASP), per 29 CFR 1910.120, for their employees to address known and potential health hazards that may be encountered at the Site during execution of the Project. The HASP should be prepared prior to the commencement of sitework. The

Contractor is responsible for the Site safety of their employees, agents, and subcontractors, and for worker protection at levels required by applicable regulations. The Contractor is responsible for the determination of the appropriate level of worker protection at all times.

1.3 Background

1.3.1 Location & Setting

The Site is located on 86.62 acres of industrial/commercial property along the west bank of the Naugatuck River in the Borough of Naugatuck, Connecticut, as shown on **Figure 1**. The Site consists of three parcels: two of the parcels (Lot 1A and Lot 3) are owned by BON and one parcel (Lot 1B) is owned by LANXESS, see **Figure 2**. The Site is bordered on the south by the Naugatuck Publicly Owned Treatment Works (Naugatuck-POTW) and the Naugatuck State Forest, on the north and west by the Borough of Naugatuck, and on the east by the Naugatuck River. The New York, New Haven & Hartford Railroad, runs north-south through the Site bisecting the upland portion from the riverfront area.

1.3.2 Environmental Conditions

Between 1904 and the 1930s, this facility was involved primarily in the reclamation of rubber. During the 1930s, other chemical manufacturing processes were introduced, including the production of aniline used as a vulcanization accelerator, and other antioxidants and accelerators used in the production of rubber, and agricultural chemicals. In the 1940s, synthetic rubber and latex production was initiated and continued through the mid-1970s. From that time until production ceased in December 2002, the facility produced various agricultural, rubber, and specialty chemicals. The major areas of production were located in the approximate center of the Site.

Multiple releases have occurred at the Site as a result of chemical use and storage associated with the various historic manufacturing processes that occurred at the facility. In general, releases are known to have occurred from temporary drum storage areas prior to disposal and from storage tanks and waste pits used to temporarily hold waste materials. Releases from storage tanks containing raw materials and manufactured materials have also been documented.

Some of the AOCs located on the Site are associated with the historic practice of disposing of waste onsite, which was acceptable at the time. Prior to 1947, solid wastes generated at the facility were disposed of onsite, principally in the South Yard and the Tire Lot, as shown on **Figure 2**. According to the Phase II Environmental Site Assessment (Woodard & Curran, 1995), solid waste disposed of onsite included aniline sludge, agricultural chemical waste, rubber chemical wastes, and fly ash from the coal-fired boilers. After 1947, waste generated during the manufacturing process was transported offsite for disposal. Beginning in 1976, waste was manifested to outside disposal Contractors for disposal in accordance with Resource Conservation and Recovery Act (RCRA) regulations.

Former Site investigations have identified impacts of volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), metals and/or other constituents in soil at multiple AOCs. Soil containing PCBs has been identified at two release areas (AOC-52: Building 317 and AOC-75: Combined PCB Area). Excavation of these areas is subject to review by the United States Environmental Protection Agency (USEPA) and CTDEEP and the procedures governing the management of soil from these locations will be addressed under a separate cover.

1.4 Roles & Responsibilities

Soil disturbance activities necessary for redevelopment (grading, utility installation, building construction, etc.) will be completed by a Contractor under agreement with BON. BON will also employ the services of a Civil Engineer, Construction Manager, and Licensed Environmental Professional (LEP), as required. An Organizational Chart is provided as **Table 1** and the key responsibilities of the various stakeholders are identified below.

The Owner is responsible for the overall implementation of the redevelopment work. It should be noted that for this MMP, the Owner is identified as BON, however, LANXESS is the Owner of the 12 Spencer Street portion of the Site and is jointly responsible for employing the LEP.

The Civil Engineer is contracted through BON and is responsible for the preparation of the design and construction drawings to be utilized during construction.

The Construction Manager is responsible for the management of redevelopment Contractors and their Subcontractors. Contractors conducting subsurface work activities shall be responsible for being familiar with the Site and for understanding and adhering to the contents of this document as well as applicable regulations and contract documents. Contractors shall also comply with the guidance of the LEP regarding the characterization, handling, and management of potentially impacted soil. The Contractor's responsibilities shall include, but are not limited to the following:

- Prepare a Site-Specific Health and Safety Plan (HASP) to establish health and safety protocols that address the relative risks of potential exposure to regulated substances in accordance with 29 CFR 1910 and 29 CFR 1926. The HASP shall be maintained on-site when work is being conducted.
- Designate a Health and Safety Manager (HSM), to prepare and be responsible for implementation of the HASP. The contractor's HSM shall keep the HASP up to date. The HSM shall have authority to issue a Stop Work Order.
- Provide the LEP with sufficient notice of excavation schedule.
- Establish and maintain soil stockpiles in accordance with **Section 4** of this document.
- If fill material must be imported, inform the LEP of all fill sources to be used for the project. The LEP must approve the material and its source as acceptable prior to use of the material as fill.
- Control dust to prevent harmful and nuisance conditions (See **Section 3.13**).
- Control erosion and sedimentation of soils (See **Section 3.7**).
- Manage wastewater generated during the decontamination procedure discussed in **Section 6**.
- Minimize the quantity of material that must be removed from the Site.
- If necessary, identify permitted disposal facility(ies) for offsite disposal and characterization requirements and that the facility is authorized and has the capacity to accept the soil anticipated to be generated at the Site. No soil shall be transported off-site for disposal without prior approval from the LEP.

- Provide the LEP documentation showing that the haulers who will transport the soil to the disposal facility or recipient are properly licensed in CT, the state where the disposal facility or recipient is located, and all states through which the soil will be transported.
- Maintain Transport Records and disposal manifests or receipts and provide copies to the LEP in accordance with **Section 8** of this document.
- Be responsible for decontamination of equipment and personnel. Provide on-site decontamination facilities to prevent tracking of contaminated soil from the Site.

The LEP's responsibilities will include:

- Be available, with sufficient advance notice, to observe the removal and management of soil.
- Collect and analyze waste characterization samples in accordance with potential disposal facility requirements, if the soil and/or water is to be disposed off-Site.
- Review documentation for all proposed fill material identified by the Contractor before it is brought on-site. No fill materials shall be brought on-site until the LEP has reviewed its characteristics.
- Review analytical results characterizing soil and evaluate options for reuse under the RSRs.
- Review analytical results of characterization and excavation limits samples, provided by the Contractor.
- Inform the Contractor's HSM of conditions or practices that may be cause for a Stop Work Order.
- Collect and archive documentation provided by the Contractor regarding the final off-site disposition or use of excess soil, as relevant.

If it is necessary to disposal of potentially impacted media (e.g., soil, fill, groundwater) excavated from the Site, LANXESS, BON, or their designated representative will sign manifests, bills of lading, or other documents as the materials generator at the Site.

1.5 Definitions & Regulatory Framework

The definitions of the terms below are from the RSRs, the Regulation of Connecticut State Agencies Section (RCSA) 22a-209 (the Solid Waste Management Regulations), or the Contaminated Soil GP. The definitions of terms and the sources are included in the description below and provided on **Table 2**.

Contaminated Environmental Media is actively managed rock, soil, sediment, groundwater, or surface water that has been affected by the release of a substance. Upon removal from the ground, Contaminated Environmental Media from the Site will be managed as either *Contaminated Material* or *Clean Fill* as defined below.

Clean Fill is defined in Subsection 22a-209-1 of the RCSA to mean natural soil, inert material, or polluted soil as defined below and may be reused in accordance with subsection 22a-133k-2(h) of the RSRs. Areas that are used solely for the disposal of Clean Fill are exempt from the provisions of the Solid Waste Regulations (RCSA 22a-209-3).

- Natural Soil, as defined in subsection 22a-133k-2(h)(4) of the RSRs, does not contain any substances above the naturally occurring concentrations or above the laboratory reporting limits.
- Inert material is defined in the Regulation of Connecticut State Agencies (22a-209-1) as rock, brick, ceramics, concrete, and asphalt fragments which are virtually inert and pose neither a pollution threat to groundwater or surface water or a fire hazard.
- Polluted Soil, as defined in subsection 22a-133k-1(65) means soil affected by a release of a substance at a concentration above the laboratory reporting limits. In order to qualify as Clean Fill, concentrations detected in the Polluted Soil must be equal to or less than the applicable criteria of the receiving parcel to be eligible for reuse under subsection 22a-133k-2(h) of the RSRs.

Contaminated Material is an operationally defined term specific to this MMP that refers to excavated soil that has been affected by a release and determined, or reasonably expected to contain one or more substances exceeding the Industrial/Commercial Direct Exposure Criteria (I/C DEC) or Class GB Pollutant Mobility Criteria (GBPMC).

- Excavated soil containing substances at concentrations that exceed the criteria of the receiving parcel cannot be reused under subsection 22a-133k-2(h) of the RSRs unless one of the following applies:
    - The soil is rendered inaccessible under subsection 22a-133k-2(b)(3),
    - The soil is environmentally isolated under subsection 22a-133k-2(c)(5), or
    - A variance from compliance with the criteria is granted based on the use of an engineered control under Subsection 22a-133k-2(F)(2)
- Contaminated Material that cannot or will not be reused in accordance with the RSRs will be transported to a permitted facility for treatment or disposal.

2. WORKER AND ENVIRONMENTAL PROTECTION

As discussed in **Section 1.3.2**, soil impacted with VOCs, SVOCs, metals or other constituents have been identified at multiple AOCs located on the Site; all AOCs identified have been delineated.

2.1 Potential Receptors and Pathways

Potential sensitive receptors at the Site include workers who are excavating or managing soil during the remediation or redevelopment activities at the Site and the Naugatuck River. The nearest potable groundwater usage is domestic wells located approximately 1.7 miles downgradient of the Site.

Potential pathways to construction workers include the following:

- Inhalation of particulate matter;
- Ingestion of soil, water, or biota; and
- Dermal absorption from water or soil.

Potential pathways to the Naugatuck River include the following:

- Erosion of excavated material;
- Migration of stormwater runoff through stockpile

2.2 Protective Measures – Workers

Exposure to harmful substances can occur through dermal contact, ingestion, and/or inhalation of impacted soil or dust. Potential exposure can be reduced by the following precautions:

- Minimize contact with contaminated soil including wearing the appropriate personal protective equipment (PPE) as required, such as gloves, long pants and shirts, coveralls, boots and overshoes, and safety glasses;
- Work practices (e.g., dust suppression, see **Section 3.13**) shall be utilized as necessary to minimize the release of blowing dust into the air; and,
- Workers should wash their hands and any other exposed body part prior to leaving the work area, eating, drinking, or performing other activities.

Protective measures shall be employed whenever managing soil known or suspected to contain pollution based on analytical results or based on field observations during excavation activities, as described in **Section 3.4**.

2.3 Protective Measures – Environment

The soil management practices presented in this MMP are intended to minimize environmental impacts associated with the disturbance of the contaminated soil. This includes the minimization of potential contaminant migration due to dust, equipment or personnel tracking, and erosion/runoff.

2.4 Site Security and Facilities

Personnel working at the Site shall be notified of both the presence of hazards and the areas designated by the HASP prepared by the Contractor. The Contractor is solely responsible for maintaining security measures that prevent workers, site visitors, off-site population, and trespassers from contacting impacted soil, whether in-place, in temporary stockpiles, or from material migration.

3. SOIL MANAGEMENT

Impacted soil must be managed in accordance with the requirements of this document, and with federal, state, and local regulations. Management practices must consider the following:

- Coordination with the LEP during Site construction activities. The LEP will also provide on-Site review of materials being excavated during the excavation process.
- Potential exposure to humans and the environment must be mitigated;
- Field screening of soils must be conducted during excavation activities;
- Segregating different waste materials from one another;
- Minimizing the amount of soil requiring disposal off-site;
- Utilizing the existing site characterization where feasible when determining the final disposition or reuse of soil;
- If off-site disposal is necessary, laboratory analysis of excess or waste soil/fill must occur prior to disposal off-site; and
- The original location, waste characterization laboratory test results, and final disposition or reuse of the soil must be documented including disposal manifests and/or other applicable records.

3.1 Soil Management Strategy

Analytical data has been collected from the Site for the purpose of investigating releases or potential releases from the AOCs. The analytical data will be used to identify the appropriate reuse options available to specific areas as the redevelopment proceeds. A flowchart identifying the method and resources that will be used to determine the potential reuse options is provided as **Table 3** and a summary of soil management terms is provided as **Table 2**. A map showing areas where analytical results exceed the I/CDEC and/or the GBPMC is provided as **Figure 3**. The figure consists of a grid containing cells (80 feet by 80 feet) overlain across the entire Site. Cells were color coded based on the following criteria:

- If the analytical results of a sample collected from within a specific cell exceed the I/CDEC and/or the GBPMC, the cell is designated as *Exceeds* and is shaded the color corresponding to the specific criteria that has been exceeded as indicated in the legend.
- Under certain circumstances, the RSRs provide the option to demonstrate compliance with the GBPMC using calculated values. If the value calculated within a specific cell using either of the methods described below exceeds the GBPMC, then that cell receives the designation of *Converted GBPMC Exceeds* and corresponding hatching shown in the legend:
    - For inorganic substances and PCBs, the mass analysis (mg/kg) divided by 20 may be compared to the GBPMC under Subsection 22a-133k-2(c)(1)(A)(ii).
    - The results of a synthetic precipitate leachate procedure (SPLP) may be compared to the groundwater protection criteria (GWPC) multiplied by a dilution factor of 10 under Subsection 22a-133k-2(c)(3)(A)(i).

- If none of the analytical results of samples collected within a specific cell exceed either the I/CDEC or the GBPMC, the cell is designated as *No Exceedances* and no shading or hatch is assigned.

- If no samples were collected from a cell it is designated as *No Sample* and receives no shading or hatch.

The following soil management categories have been established based on the designations described above as shown on **Figure 3**:

- Exceeds I/C DEC and GBPMC (or Converted GBPMC) - managed as Contaminated Material.

- Exceeds GBPMC (or Converted GBPMC)- managed as Contaminated Material.

- Exceeds I/C DEC - managed as Contaminated Material.

- No Exceedances – managed as Clean Fill unless field screening/observation indicates otherwise. May require additional analysis and the Commissioner's approval for reuse offsite.

- No Samples

    - Managed as Clean Fill if reused onsite unless field screening/observation indicates otherwise.

    - Approval by the LEP is required for reuse offsite. Additional characterization of the excavated material and the Commissioner's may be required.

Soil that exceeds or is reasonably expected to exceed the GBPMC and/or the I/C DEC that will be temporarily stockpiled will be managed as Contaminated Material as defined in **Section 1.5** of this document. As detailed in the RAP, excavated soil that exceeds the GBPMC and/or the I/C DEC may be reused under Section 22a-133k-2(h) by rendering it inaccessible under subsection 22a-133k-2(b)(3), environmentally isolated under subsection 22a-133k-2(c)(5), through the use of an engineered control, or transported to a permitted facility for treatment or disposal.

3.2 Discovery of a New Release

The soil management strategy discussed above and shown on **Figure 3** was developed using data gathered for the purpose of investigating specific AOCs. The Contractor shall perform field screening as described in **Section 3.8** during the excavation of material on the Site. The LEP will also provide on-Site review of materials being excavated during the excavation process. If evidence of a release (underground storage tank, visual staining, strong odor, etc.) is observed while excavating in an area located outside of a known release area (identified as No Exceedances or No Sample on **Figure 3)** the Contractor shall notify the LEP. The LEP or their designee will determine if the field observations indicate a new release area and if the levels of pollution indicated through field screening should be quantified. The LEP may recommend this material be managed as Contaminated Material and segregated in a stockpile for characterization.

3.3 Excavation and Classification of Soil for Onsite Reuse

The Site is comprised of three parcels (Lot 1A and Lot 3 owned by BON and Lot 1B owned by LANXESS). All parcels onsite are subject to the GBPMC and following the execution of an Environmental Use Restriction (EUR) restricting residential activity as described in the RAP, all parcels will be subject to the I/C DEC. Soil

excavated from the Site will be categorized as either Clean Fill or Contaminated Material as defined in **Section 1.5** of this MMP and on **Table 2**.

Clean Fill may include natural soil, inert material, and/or Polluted Soil that is eligible for reuse in accordance with Section 22a-133k-2(h). The management of Clean Fill for reuse on the Site will be subject to the following requirements:

- Clean Fill that meets the definition of natural soil and/or inert material may be reused onsite with prior approval from the LEP. Soil screening, as described in **Section 3.8,** and potentially analytical testing data, is required to meet this definition.
- Clean Fill containing one or more substances at concentrations less than or equal to the I/C DEC and/or the GBPMC (identified as No Exceedances on **Figure 3**) may be reused at the Site in accordance with Section 22a-133k-2(h) of the RSRs on the same parcel, on an adjacent parcel, or on a separate parcel impacted by a similar release provided that one of the following conditions (A, B, or C) is met:

    A. Soil excavated from a release area that contains substances below the I/C DEC and the GBPMC may be reused on the same parcel it was excavated from by providing notice to the Commissioner of the CTDEEP (the Commissioner), provided that the following conditions are met:

        - If concentrations of substances detected exceed the GAPMC, the soil may only be placed over soil and groundwater that has already been affected by a release.
        - If the soil contains VOCs, it is not placed under a building.
        - The soil does not contain PCBs.

    B. Excavated soil may be reused onsite (Lots 1A, 1B, or 3) on the same parcel from which it was excavated from, on a different parcel affected by the same release, or on an abutting parcel affected by a release of similar substances if the following conditions are met:

        - If the soil contains VOCs other than volatile petroleum substances at concentrations that exceed the GAPMC, measures to prevent the migration of VOCs into overlying buildings been implemented and approved by the commissioner as described in Section 22a-133k-3(c)(3).
        - If the soil containing any VOCs is placed under a building, measures to prevent the migration of VOCs into overlying buildings been implemented and approved by the commissioner as described in Section 22a-133k-3(c)(3).
        - If the soil contains PCBs, the Commissioner has issued written approval for the reuse of soil containing PCBs.
        - Prior to reuse on an abutting or adjacent parcel, the Commissioner has issued written approval.

C. Excavated soil may be reused onsite (Lots 1A, 1B, or 3) on a parcel other than the one it was excavated from only if the Commissioner has approved such reuse and the following conditions are met:

- All substances are below the applicable criteria of the receiving parcel.
- The soil is placed over soil and groundwater that has already been affected by a similar release.
- The cumulative depth of all reused of polluted soil does not exceed four feet above the existing grade, or the cumulative depth of all polluted soil does not exceed ten feet, provided that it can be demonstrated that a depth greater than four feet is required for redevelopment.

Contaminated Material is an operationally defined term specific to this MMP and describes excavated soil that exceeds the I/C DEC and/or the GBPMC, as described in **Section 1.5** and on **Table 2**.

- Contaminated Material may be eligible for reuse onsite accordance with Section 22a-133k-2(h) of the RSRs as Polluted Soil if one of the following requirements have been met:

A. The soil is rendered inaccessible or environmentally isolated and the Commissioner has granted an exemption from the RSRs.

B. The soil is beneath an engineered controlled and a variance from the RSRs is issued by the Commissioner.

For both Clean Fill and Contaminated Material, the LEP will be responsible for determining if and where soil can be reused on site and will coordinate any required approvals from the Commissioner as necessary.

3.4 Excavation of Soil for Offsite Reuse

The Contractor shall endeavor to minimize the generation of excess soil that may require off-site reuse. The Commissioner's approval is required for the reuse of Polluted Soil offsite (on a parcel other than Lot 1A, Lot 1B, or Lot 3). The reuse of soil offsite is subject to review by LANXESS, BON, and the LEP.

- Clean Fill that meets the definition of natural soil and/or inert material may be reused offsite with prior approval from LANXESS, BON, and the LEP. Soil to be reused offsite may be subject to additional characterization requirements.
- Clean Fill containing one or more substances at concentrations less than or equal to the applicable criteria of the receiving parcel may be reused in accordance with Section 22a-133k-2(h) of the RSRs on an adjacent parcel or on a separate parcel impacted by a similar release provided that one of the following conditions (A, or B) is met:

A. Excavated soil may be reused on a different parcel affected by the same release, or on an abutting parcel affected by a release of similar substances if the following conditions are met:

- If the soil contains VOCs other than volatile petroleum substances at concentrations that exceed the GAPMC, measures to prevent the migration of VOCs into overlying buildings been implemented and approved by the commissioner as described in Section 22a-133k-3(c)(3).
- If the soil containing any VOCs is placed under a building, measures to prevent the migration of VOCs into overlying buildings been implemented and approved by the commissioner as described in Section 22a-133k-3(c)(3).
- If the soil contains PCBs, the Commissioner has issued written approval for the reuse of soil containing PCBs.
- Prior to reuse on an abutting or adjacent parcel, the Commissioner has issued written approval.

B. Excavated soil may be reused on a parcel other than the one it was excavated from only if the Commissioner has approved such reuse and the following conditions are met:
   - All substances are below the applicable criteria of the receiving parcel.
   - The soil is placed over soil and groundwater that has already been affected by a similar release.
   - The cumulative depth of all reused of polluted soil does not exceed four feet above the existing grade, or the cumulative depth of all polluted soil does not exceed ten feet, provided that it can be demonstrated that a depth greater than four feet is required for redevelopment.

- Contaminated Material excavated from the Site may not be reused offsite.

The LEP will be responsible for determining if and where soil can be reused offsite and will coordinate any required approvals from the Owners and the Commissioner as necessary.

3.5 Excavation of Contaminated Material for Off-site Disposal

The Contractor shall endeavor to minimize the generation of excess soil that may require off-site disposal. As defined in **Section 1.5**, excavated soil that contains one or more substances at a concentration that exceeds the GBPMC and/or I/C DEC is defined in this document as Contaminated Material. Contaminated Material shall not be transported off-site until the results of the waste characterization (see **Section 6.2**) have been reviewed by the LEP and the material has been properly characterized and documented for disposal. Off-site recycling, treatment and/or disposal facilities for Contaminated Material will be identified and approved in advance by the LEP, in accordance with applicable regulations and procedures described in **Section 6.2**.

Contaminated Material shall be considered and managed as non-hazardous until and unless it is shown to meet the definition of hazardous waste through laboratory analysis, see **Section 6.2** for additional detail. The on-site storage shall be periodically evaluated by the Contractor and LEP as work progresses.

Adjustments may be made considering the availability of on-site storage areas, the type and amount of temporarily stored material present, and weather conditions. Stockpile management shall be conducted as described in **Section 4**.

3.6 Management of Asphalt and Building Material Debris

Asphalt that is removed prior to excavating soil shall be removed and disposed of appropriately. Building material debris is not anticipated to be generated during the redevelopment; however, it is possible that historic foundations or slabs may be encountered. Management methods involving the reuse or recycling of these asphalt and building material debris are preferred. No further specific measures for the disposal of asphalt are included in this document.

3.7 Temporary Site Fencing

Temporary construction fencing will be installed along the perimeter of the limit of work. The Site will be secured along the Site perimeter. Ingress and egress points will be barriered during work hours and securely locked during off hours with appropriate signage maintained by the Contractor.

3.8 Soil Screening Methods

Visual, olfactory, and instrumental soil screening (PID) assessments will be performed initially by the Contractor during remediation and development-related ground intrusive activities into known or potentially contaminated material, if applicable. If field screening methods indicate that polluted or contaminated soil is present during the excavation of soil that has not been characterized (No Analytical Results on **Figure 3**), the Contractor shall notify the LEP. The LEP or their designee will determine if the soil from this location will be managed as Contaminated Material as described in **Section 3.1**. The LEP will also provide on-Site review and potentially, additional screening and testing, of materials being excavated during the excavation process.

3.9 Fluids Management

Fluids and other liquids generated during the remedial activities will be handled, transported, and disposed of in accordance with applicable local, state and federal regulations. Decontamination procedures will be followed in accordance with the QAPP decontamination protocols.

3.10 Spill Response

In the event that there is an onsite spill associated with RAP activities, the following protocols will be implemented by the Contractor:

- Eliminate ignition sources that may be present.
- Avoid contact with spilled product.
- Keep unprotected personnel upwind of spill area.
- Stop the source of the release if it is safe to do so.
- Contain the released oil or spilled material with absorbent materials.

- Prevent released material from entering storm water catch basins, water sources, or other preferential pathways.
- Restrict access to impacted and potentially threatened areas.
- If a spill occurs on an unpaved area, remove and dispose of all contaminated soil in accordance with applicable state and federal regulations.
- Ensure recovered spill material is collected, containerized, labeled, properly characterized, and disposed of in accordance with all applicable state and federal regulations.
- Notify the CTDEEP Emergency Response Unit by telephone (860-424-3338) to report of the spill and associated response activities.

In addition, although not anticipated, any non-aqueous phase liquid (NAPL) that is encountered during excavation activities will be recovered with a combination of passive recovery technologies including oil absorbent materials (booms, socks, pads, etc.), and active recovery technologies, including pumps and/or vacuum-truck, depending on the quantity, location and Site conditions. Recovered NAPL will be characterized, if appropriate, and disposed of at an appropriately permitted offsite disposal facility. CTDEEP will be notified in the event of any spills or NAPL recovery activities, if appropriate.

3.11 Inspections

Disturbed areas, material storage areas exposed to precipitation and in-place erosion control measures will be inspected by the Contractor once every seven (7) days, within 24 hours after any storm event greater than one half (0.5) inch of rainfall, and at least once during prolonged rainfall or snowmelt.

3.12 Health and Safety Plan

All subsurface site activities will be conducted in accordance with a Site-Specific Health and Safety Plan (HASP), prepared in compliance with the requirements of the Occupational Safety and Health Administration (OSHA) HAZWOPER regulations (29 CFR Standard 1910.123).

3.13 Dust Suppression

The Contractor shall control dust and air-borne materials generated during the Work to protect the health of on-site workers and to minimize the release of dust into surrounding areas. General Site dust control (e.g., roadways, exposed soils) shall be accomplished using a uniform spray of water. Water used to suppress dust shall be applied so as to minimize pooling or runoff. The Contractor shall be responsible for meeting the metering and flow control requirements of the water supplier. The Project-Specific Soil Management Plan developed by the Contractor shall include a description of the air-monitoring program implemented to ensure that the dust suppression methods are sufficient.

Soil stockpiles shall be maintained in a covered condition to minimize wind-blown dust. Dust generated from the disturbance or handling of impacted and non-impacted soils shall be controlled to the satisfaction of the Environmental Professional, Owner, and regulatory authorities with jurisdiction. Excessive wind-blown dust, including any that blows off-site may be cause for a Stop Work Order to be issued.

4. STOCKPILE MANAGEMENT

Soil excavated from the Site will be managed according to the results of analytical data collected from the location, soil screening conducted during excavation, and the intended reused. As discussed in **Section 1.5**, all material on the Site will be managed as either Contaminated Material or Clean Fill. The stockpile management for each of these categories of materials is described below.

4.1 General Stockpile Management

- The locations of all stockpiles shall be approved by the LEP and shall not prevent or impede access to a work area or existing buildings by emergency equipment or LANXESS employees.

- Sediment and erosion control measures shall be in place in accordance with the best management practices discussed **Section 5** of the Contaminated Soil GP (see **Appendix A**) prior to stockpiling and shall be maintained until the stockpiles have been removed and the Staging, Transfer and/or Temporary/Storage Area has been determined to be uncontaminated and ready for decommissioning. Stockpiles shall be placed on impervious surfaces to prevent or minimize the transfer or infiltration of contaminants from the soil stockpiles to the ground. Care shall be exercised to prevent erosion and sedimentation control measures from causing concentrated flow, particularly near material stockpiles. Excessive stormwater runoff may be cause for issuance of a Stop Work Order.

- No soil stockpiles shall be left uncovered or unsecured at the end of the workday. The polyethylene sheeting (6-mil thickness) cover shall be secured with staked hay bales, sand berms, sandbags, tires, rope, or other method that is sufficient to withstand a sustained wind of up to 25 mph. The stockpiled material shall be kept covered at all times to prevent formation of leachate from rainwater and the generation of dust on dry windy days, except for a stockpile to which material is being added to or removed from on a particular day. The Staging, Transfer and/or Temporary/Storage Area shall be inspected daily to evaluate whether the cover and berms are intact and functioning as required. Repairs to the covers and berms shall be made as necessary to maintain the stockpiles in good condition and to prevent contact with rainwater or blowing of the stockpiled material.

- Each stockpile of material shall be labeled to identify the area from which the materials were removed and the date on which the material was first placed in the stockpile. The markers shall remain in place until the material is ready for on-site reuse or transport for off-site disposal.

- Stockpiles shall be inspected for presence of incidental excavation wastes and materials and for any suspect contaminated soil that may contain hazardous wastes.

- Stockpiles shall be placed no closer than 2 feet from the edge of an excavation and no closer than 50 feet from any property line. Stockpile area(s) shall be clearly delineated in order to prevent possible exposure to workers at the Site.

The LEP will occasionally review implementation of the stockpile management and segregation measures. Unless specific knowledge indicates otherwise, all stockpiled materials shall be managed as non-hazardous. When characterization of the material is known, the Contractor shall make necessary adjustments to comply with applicable labeling, handling, and storage requirements.

4.2 Stockpile Management of Clean Fill

As defined in Subsection 22a-209-1 of the Regulation of Connecticut State Agencies, Clean Fill may consist of natural soil, inert material or polluted soil that will be reused under Section 22a-133k-2(h) of the RSRs. Soil excavated from following soil categories shown of **Figure 3** will be managed as Clean Fill:

- No Exceedance Detected – will be managed as Clean Fill if reused onsite.
- No analytical samples – will be managed as Clean Fill unless screening indicates pollution is present.

In addition to the best management practices identified in the General Stockpile Management, stockpiles consisting of Clean Fill will be subject to the following additional requirements:

- Signage shall be posted approximately 25 feet at the Staging, Transfer and/or Temporary/Storage Area entrance, identifying the name of the designated site contact, a contact phone number, the hours of operation, and the phrase "Temporary Soil Staging Area – Clean Fill".

4.3 Stockpile Management of Contaminated Material

This section applies to Contaminated Material that will be temporarily stockpiled onsite and does not apply Contaminated Material that is dynamically or direct loaded and transported for onsite reuse (see **Section 3.3**) or disposal (see **Section 3.4**). Contaminated Material excavated and temporarily stockpiled from the following soil categories shown on **Figure 3** will be managed as Contaminated Material and subject to the best management practices identified below:

- Exceeds both GBPMC and I/C DEC - will be managed as Contaminated Material
- Exceeds GBPMC - managed as Contaminated Material
- Exceeds I/C DEC - managed as Contaminated Material

Contaminated Material that is to be managed in temporary stockpiles, or DOT approved containers (rolloffs) either adjacent to the point of generation, or at a designated on-site or off-site staging areas approved by the LEP. The Staging, Transfer and/or Temporary/Storage Areas shall be designated in a manner in order to accommodate work sequencing and access to work areas on the Site.

The Contaminated Soil GP expired on September 19, 2018, and as a result, CTDEEP is unable to issue registrations and approval of registrations for the activities authorized by the general permit. CTDEEP is in the process of updating this general permit and anticipates its reissuance and anyone managing contaminated soil or sediment is requested to follow the best management practices that are outlined in Section 5 of the Contaminated Soil GP.

At a minimum, the following stockpile management procedures shall be employed for all excavated soil managed as Contaminated Material:

- Stockpiles managed as Contaminated Material will not exceed 1,000 cubic yards cells as described in Subsection (b)(5) of the Contaminated Soil GP, unless a Project Specific Soil Management Plan has been approved by the Commissioner. The Contractor shall be responsible for ensuring that the maximum volume requirements for individual stockpiles is not exceeded.

- Stockpiles managed as contaminated soil will remain separated by concrete barrier, pile spacing, or other method to ensure storage piles remain physically separated as described in Subsection (b)(4) of the Contaminated Soil GP. The Contractor shall be responsible for ensuring that the maximum volume requirements and physical separation requirements are adhered to.

- The Staging, Transfer and/or Temporary/Storage Area shall be designed, operated, maintained, and repaired in accordance with the expired general permit specification requirements and applicable regulations, prior to excavation.

- Signage shall be posted approximately 25 feet at the Staging, Transfer and/or Temporary/Storage Area entrance, identifying the name of the designated site contact, a contact phone number, the hours of operation, and the phrase "Temporary Soil Staging Area – Contaminated Soil".

- Stockpile area(s) shall be clearly delineated in order to prevent possible exposure to workers at the Site.

- Each soil stockpile staged at the Contaminated Soil Staging, Transfer and/or Temporary/Storage Area must be characterized prior to transporting such stockpile for soil reuse or disposal.

5. DECONTAMINATION

5.1 Equipment Decontamination

Equipment and vehicles that comes in contact with contaminated material during the execution of site activities will be decontaminated. All equipment, tools, and vehicles entering the limits of the construction areas and utilized for remedial activities will be decontaminated prior to leaving the site. For work conducted on site, decontamination procedures will be followed in accordance with the site specific QAPP decontamination protocols or as specified in the project-specific addenda to the RAP. A detailed discussion of the specific decontamination procedures will be developed by the Contractor. For decontamination of equipment used in the excavation and handling of PCB-impacted materials, decontamination will be performed local to the excavation area within the decontamination zone. Remediation of such equipment will be performed in accordance with 40 CFR §761.79(c), which identifies specific procedures that are applicable to movable equipment, porous surfaces, and non-porous surfaces that come into contact with PCB remediation waste. Certain materials utilized in PCB remediation, not amendable to decontamination, will be disposed of in accordance with TSCA requirements.

Prior to moving equipment, tools, and vehicles from a contaminated area of use, the Contractor shall scrape and otherwise remove as much dirt/material as possible, and then power wash it in the vicinity of a designated established decontamination pad, prior to use in another area of the Site, or transport off-site (See **Section 5.2**).

5.2 Establishment and Maintenance of a Decontamination Pad

The Contractor shall be responsible for establishing and maintaining a decontamination pad for heavy equipment. The decontamination pad shall be located in an area of the Site approved by the LEP and that meets the following criteria:

- Free from Site traffic;
- Available throughout the duration of the project;
- Away from work areas;
- Readily accessible; and
- Does not prevent or impede Site use or emergency vehicle access to the Work area.

The design and construction of the decontamination pad shall be subject to the approval of the LEP and shall meet or exceed the following design criteria:

- The base shall consist of multiple sheets of polyethylene liner or equivalent, covered with stone, with a minimum 12-inch-high supported perimeter berm.
- The pad shall be of adequate size to accommodate the width and length of the largest piece of equipment that will come into contact with the impacted material.
- The pad will be sloped to a low point water-tight sump for collection of decontamination water. During periods of precipitation, the decontamination pad will be covered with an impermeable tarp to prevent rainwater from accumulating in the pad.

- After completion of activities requiring the use of the decontamination pad, the pad shall be removed, and all pad contents and components properly disposed.

The Contractor shall maintain a water source at the decontamination pad to provide an adequate volume of clean water for equipment decontamination. Equipment decontamination will be conducted using a power washing unit capable of cleaning the largest piece of equipment to be used at the Site.

In addition to the decontamination pad described above, decontamination of excavation equipment may be performed at or near the location where excavation equipment is used. This will be accomplished using a power washer and an appropriate container for collection of decontamination water. Collected decontamination water shall be containerized and managed as described in **Section 6**.

Liquids (wash water) and sediments or sludges removed during cleaning shall be pumped or drained from the decontamination pad and collected in either DOT approved 55-gallon drums (solids and/or liquids) or holding tanks (liquids only). To the extent possible, the amount of liquids in the sludge collection drums shall be kept to a minimum. Any disposable cleaning items (i.e., single use rags, mops, brushes) shall be decontaminated (as appropriate), collected in sealed plastic bags (labeled as to contents), and placed in DOT approved containers. The containers of decontamination liquids and sludges shall be managed as described in **Section 6**.

The Contractor shall be responsible for collecting and analyzing samples of the containerized wash water in accordance with the requirements of the recycling or disposal facility identified by the Contractor.

6. WASTE MANAGEMENT

Management protocols and requirements for soils and solids are included in **Section 3** and **Section 4**.

6.1 Wastewater Management

Wastewater that may potentially be generated during the Work includes the following:

- Groundwater removed from excavations;
- Water accumulated in below ground basements, vaults and chambers; and
- Decontamination fluids and wastewater from decontamination activities.

It is not anticipated that soil excavation work will occur at depths that will require dewatering. In the event dewatering of excavations is necessary, the Contractor shall provide appropriate pumps, hoses and drums, tanks or other suitable containers as required based on the estimated volume of water to be managed. Dewatering shall be conducted so as to minimize the amount of sediment in the water. Water generated by dewatering operations shall be containerized until it can be characterized, and the proper method of treatment and disposal determined.

Wastewater shall be containerized and segregated based on the source and/or anticipated wastewater characteristics. Wastewater anticipated to require different protocols for characterization, treatment or disposal shall not be mixed.

Liquids (wash water) and sediments or sludge that result from decontamination activities shall be pumped or drained into either DOT approved 55-gallon drums (solids and/or liquids) or holding tanks (liquids only). To the extent possible, the amount of liquids in the sludge collection drums shall be kept to a minimum. Any disposable cleaning items (i.e., single use rags, mops, brushes) shall be decontaminated (as appropriate), collected in sealed plastic bags (labeled as to contents), and placed in DOT-approved containers.

The Contractor shall be responsible for characterizing the wastewater and the identification of acceptable facilities for treatment and disposal of wastewater, and sludge, generated at the Site. The Contractor shall be responsible for legally transporting the liquids, and sludge, to the identified disposal facility. The Contractor shall provide information on both the treatment and/or disposal facility, and transporters to the LEP for acceptance prior to treating or removing wastewater and sludge.

6.2 Waste Characterization

Waste material covered under this MMP may consist of: Contaminated Material that cannot or will not be reused in accordance with Section 22a-133k-2(h) of the RSRs and wastewater generated as described in **Section 6.1**. Potentially impacted waste materials (soil and wastewater) shall be characterized in accordance with the requirements of the disposal facility identified by the Contractor. Materials will be characterized based on analytical results from samples collected from stockpiles and containers as needed to characterize the waste in accordance with applicable regulations and the requirements of the potential off-site recycling, treatment, and/or disposal facility. Available analytical results from prior investigation of the Site may be used to augment waste characterization but shall not be solely relied upon. The number of samples and

analytical testing parameters for the purpose of waste characterization will vary depending upon the material and the requirements of the potential destination facility. At a minimum, samples should be analyzed for the COCs identified in soil during previous investigation and remediation activities at the Site.

Sample identification, chain of custody procedures, data management, and tracking for waste characterization samples will be conducted by the Contractor in accordance with the applicable laws, regulations, and standards of practice. The Contractor shall inform the LEP when material samples for waste characterization analysis are being collected. The stockpiles and containers of materials that require characterization sampling and analysis shall be sampled at a minimum frequency of the potential destination recycling, treatment, and/or disposal facility. Composite and/or discrete samples shall be collected from the materials in the stockpile(s)/container(s) following an appropriate protocol. All analyses shall be conducted in a manner consistent with USEPA analytical methods appropriate for the waste.

All waste materials will initially (prior to waste characterization) be considered and managed as Contaminated Soil, but non-hazardous. Based on the results of the waste characterization, the handling and management of materials shall be adjusted as necessary. The resulting characterization will also be used to select the appropriate method for transportation, the appropriate disposal documentation requirements, and an appropriate recycling, treatment, and/or disposal facility.

6.3 Transportation of Waste Materials

The Contractor shall comply with all applicable federal, state, and local regulations applicable to hauling soil, water, and sludge including CTDEEP, CTDPH, DOT, OSHA, RCRA, and TSCA regulations. Non-compliance with any of the following conditions may be cause for issuance of a Stop Work Order:

- All vehicles and containers transporting waste must be in compliance with applicable state and federal regulations for transporting waste materials.
- Transporter(s) shall have the necessary permits and sufficient drivers, containers, tractors and trailers. The transporter shall have no outstanding fines or penalties with applicable state transportation or law enforcement agencies. Continued violations (more than one per month over two or more consecutive months) of applicable transportation and waste handling laws and regulations (including but not limited to vehicle safety and litter blowing) may result in termination of the transporter.
- The Contractor shall inspect haul vehicles for the presence of waste material and soil on the wheels and under carriage. These materials shall be removed and properly handled by the Contractor before leaving Site.
- No transport vehicles that are leaking or spilling materials shall be allowed to leave the Site.
- The Contractor shall ensure tarpaulin covers are provided for transport vehicles, which shall cover excavated materials during transport. Vehicles shall not be overfilled.
- The Contractor is responsible for any and all actions and costs necessary to remedy waste spilled in loading or transit.

  All transport vehicles shall be clean before filling with waste material.

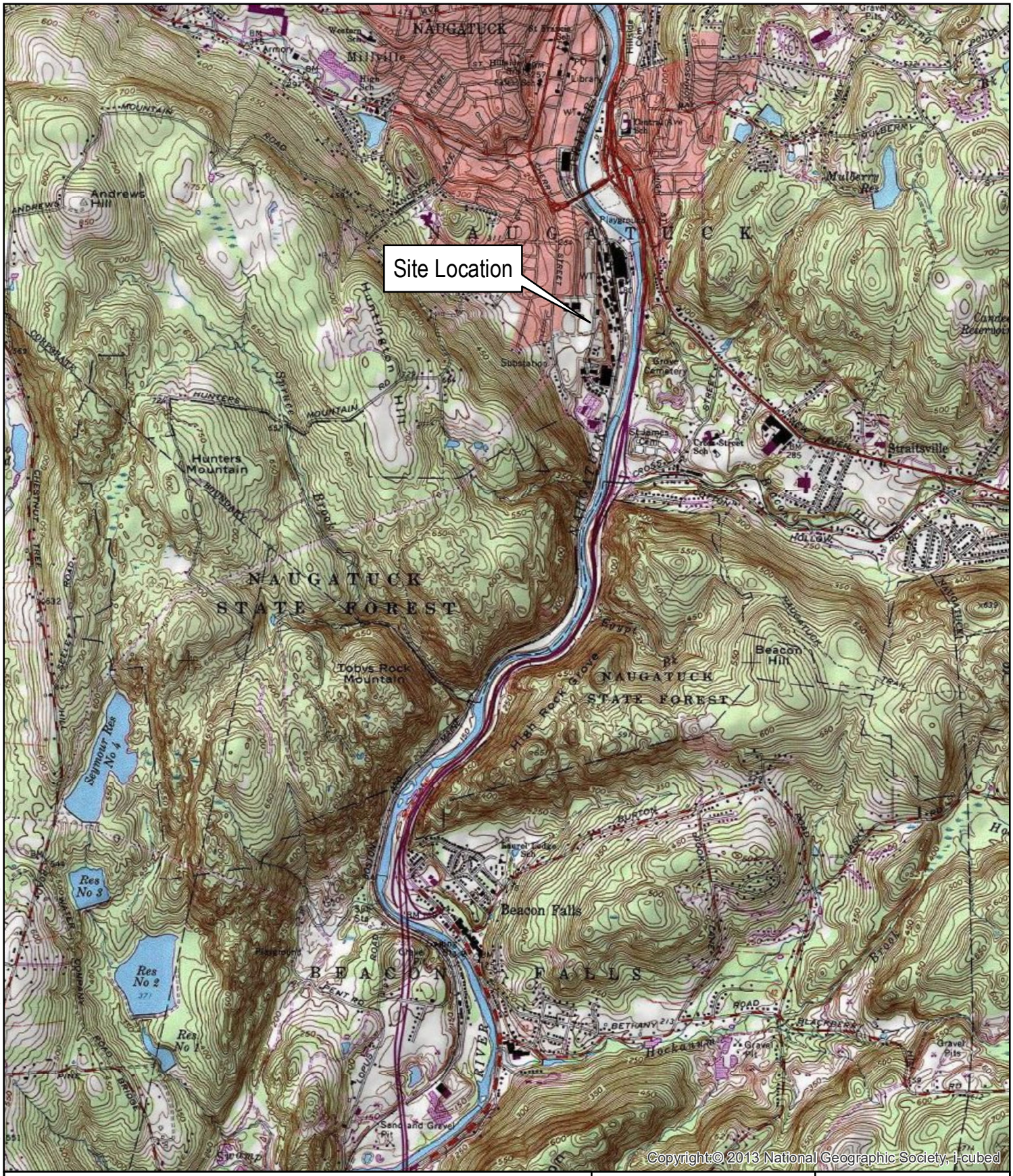
FIGURES

Figure 1: Site Locus

Figure 2: Site Plan

Figure 3: Sitewide Soil Management Plan

Figure 4: Phase I Redevelopment Plan



Site Location Map

Former Crompton
Manufacturing Co. Site Naugatuck, Connecticut

Figure 1

N

1 in = 0.5 miles

0 0.125 0.25 0.5 Miles

Woodard & Curran

Project #: 206644
Map Created: September 2021

Figure Exported: 9/12/2021 By: Kelich Using: \\woodardcurran.net\shared\Projects\206644 Crompton Naugatuck CtWip\GIS\Project Files\2021 COI Report\Fig 1 - Site Location Map.mxd

Area of Concern (AOC) Key:

1. Hazardous Waste Container Storage Area #1
2. Hazardous Waste Storage Area #2
3. Building 54 Laboratory Sample Storage Unit
4. Temporary Drum Storage Unit
5. Tank System (Tank 33C)/Tank Farm 109
6. Nonenes Underground Storage Tank
7. Nonenes Aboveground Storage Tank
8. Waste Nonenes Storage Pad
9. Tank System (Tank 135C)
10. Drum Lot
11. Tire Lot
12. Pretreatment Plant Drain Line
13. South Yard Fill material
14. Ground Staining Bldgs. 601/604
15. Building 676 Concrete Vats
16. Former Coal Storage Area
17. Railroad Tie Storage Area
18. Pretreatment Plant - Equalization Tanks
19. Pretreatment Plant - Clarifier
20. Pretreatment Plant - Lift Station
21. Pretreatment Plant - Sludge Pit
22. Material Storage Area
23. Fire Training Area
24. Building 84 Condensate Sump
25. Building 81 Wastewater Sump
26. Building 55 Condensate Sump
27. River Sediment
28. Building 47
29. Building 52
30. Building 54
31. Building 55 Drum Cleaning Area
32. Building 58
36. Building 79
37. Building 80
38. Building 81
39. Building 86
40. Building 88
41. Building 89
42. Building 94
43. Building 100
44. Building 101E
45. Building 101W
46. Building 109
47. Building 111
48. Building 112
49. Building 121
50. Building 124
51. Building 310 Lab Waste Storage Area
52. Building 317
53. Building 321
54. Building 617
55. Building 618
56. Building 668
57. Building 677
58. Building 681
59. No. 6 Fuel Oil Tank
60. Drum Rolloff
61. Building 75 Tank Farm
62. Building 79 Tank Farm
63. Building 88/94 Tank Farm
64. Building 120 Tank Farm
65. Building 124 Tank Farm
66. Underground Acetone Storage Tank
67. Aniline Sludge Pits
68. Unloading Docks
69. Coagulation Pit
70. Less Than 90 Day Container Storage Area #3
71. Fuel Tank System
72. Trash and Cardboard Compactors
73. Facility Wide Dumpsters (Not Shown)
74. Site Wide Underground Piping
75. Combined PCB Investigation Area
76. Ecological Risk-MW-3 Area Metals Impacts
77. Potential Former Foundry

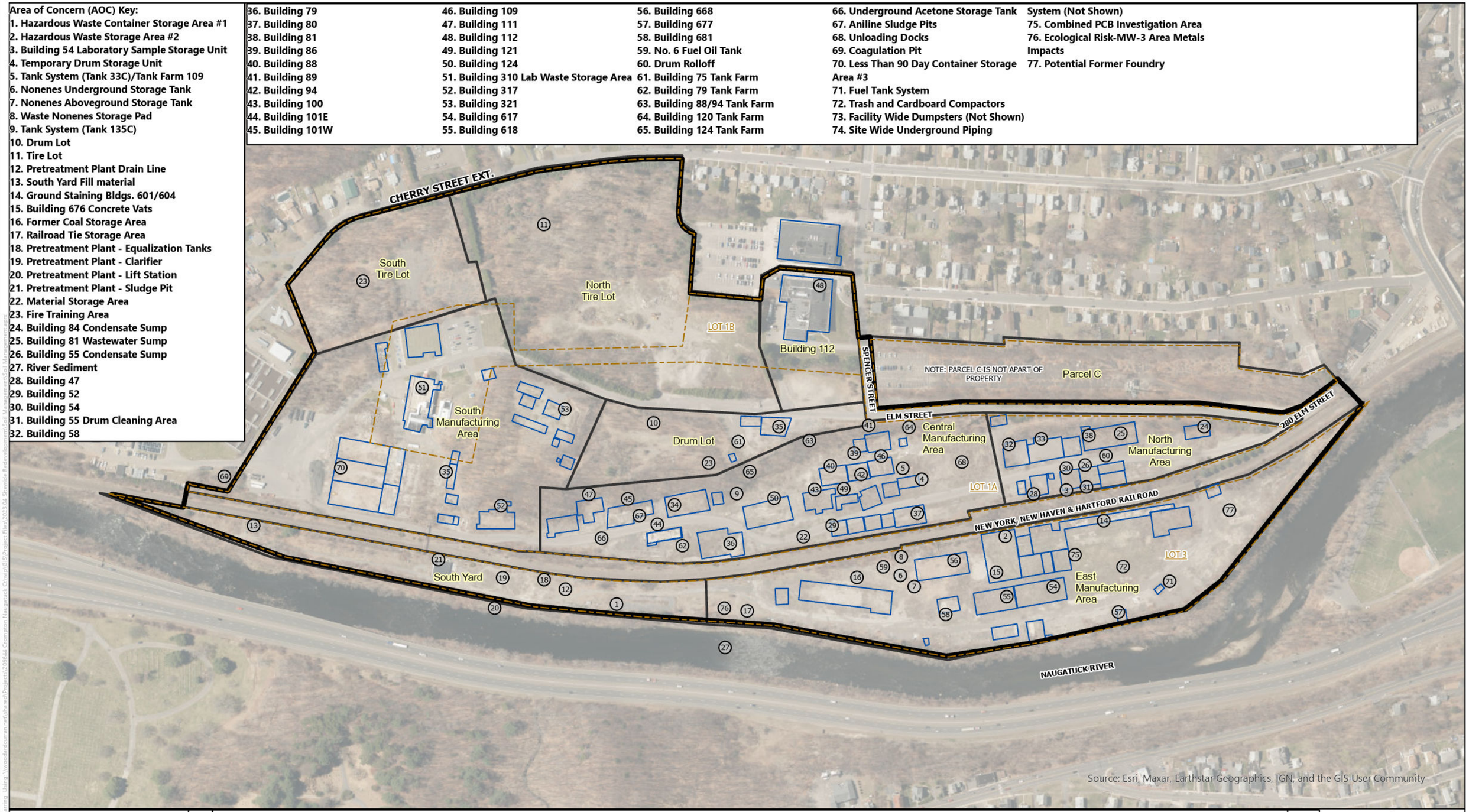


Figure 2

Sitewide RSR Exceedances in Soil

Former Uniroyal Facility

Naugatuck, CT

Legend

- Site Areas
- AOCs
- Property Boundary
- Site Boundary
- Current and Former Site Buildings & Features

Note:

1. Property lines and the retained parcel are based on the following drawings received from Civil 1: "3535-ALTA.dwg" and "3535-TOPO.dwg" received on May 31, 2023 and the 80% design drawing received on May 17, 2023. The Borough of Naugatuck's Assessor's maps have not yet been updated to reflect these parcels.

N

0 250 500 1,000 Feet

Woodard & Curran

Project #: 206644

Map Created: July 2023

Notes:
1. The soil exceedance categories displayed here are a conservative estimate based on the maximum exceedance across all depths sampled at a given location.
2. Converted GBPMC indicates that the result was compared to the standard using one of the following approaches:
• For inorganic analytes and PCBs, mass-based sample results were divided by 20 and compared to the applicable SPLP-based GBPMC standard, as specified in 22a-133k-2(c)(1)(A)(ii) of the RSRs.
• For organic analytes, SPLP results were compared to 10 times the GWPC standard, as specified in Section 22a-133k-2(c)(3)(A)(i) of the RSRs.
3. These soil exceedance categories will be used to inform the future soil management based on the redevelopment plans.
4. Property lines, retained parcel, and phase 1 construction area are based on the following drawings received from Civil 1: "3535-ALTA.dwg" and "3535-TOPO.dwg" received on May 31, 2023 and the 80% design drawing received on May 17, 2023.

Figure 3

Sitewide Soil Management Plan

Former Uniroyal Facility
Naugatuck, CT

Legend

- Site Boundary
- Property Boundaries
- Phase 1 Construction Area

Soil Exceedance Categories
- No Exceed
- ICDEC Exceed
- Converted GBPMC Exceed
- GBPMC Exceed
- Converted GBPMC and ICDEC Exceed
- GBPMC and ICDEC Exceed

Soil Management Categories
- No Sample
- No Exceedance
- Exceeds ICDEC
- Exceeds Converted GBPMC
- Exceeds GBPMC
- Exceeds ICDEC and Converted GBPMC
- Exceeds ICDEC and GBPMC

0 250 500 1,000 Feet

N

Woodard & Curran

Project #: 206644
Map Created: June 2023

LEGEND

- PROPERTY LINE
- PROPOSED BUILDING SETBACK LINE
- EXISTING PAVEMENT TO REMAIN
- PROPOSED PAVEMENT
- EXISTING PAVEMENT TO BE REMOVED

CHERRY STREET EXT.

CHERRY STREET

CHARLES

BUILDING 'C'
28,500 sf
FFE = 230.0

BUILDING WING
240' X 260'
62,400 SF

FFE = 254.0

WAREHOUSE
TOTAL = 206,450 SF

BUILDING WING
335' X 430'
144,050 SF

FFE = 254.00

SHEET C-2.1

SHEET C-2.2

CHERRY STREET EXT.

LANXESS

SPENCER STREET

WARD STREET

LIMITS OF CONSTRUCTION PHASE 1

EX. LANXESS DRIVEWAY TO REMAIN

PROPOSED LANXESS DRIVE

LANXESS

LIMITS OF CONSTRUCTION PHASE 1

EXISTING LANXESS DRIVE

ELM STREET

BUILDING 'D'
40,000 sf
FFE = 250.0

BUILDING 'E'
60,000 sf
FFE = 238.0

BUILDING 'G'
30,000 sf
FFE = 182.0

BUILDING 'F'
74,000 sf
FFE = 185.0

NEW YORK, NEW HAVEN & HARTFORD RAILROAD

EXISTING HAUL ROAD

PROPOSED THROUGH ROAD

MON

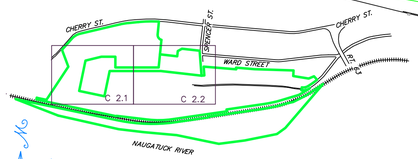
NEW YORK, NEW HAVEN & HARTFORD RAILROAD

NAUGATUCK RIVER

NAUGATUCK RIVER

NAUGATUCK RIVER

NAUGATUCK RIVER



SHEET INDEX

NO.	REVISION	DATE
	Previous Editions Obsolete	

100 0 50 100 200

1 inch = 100 ft.

BOROUGH OF NAUGATUCK
229 CHURCH STREET
NAUGATUCK, CT 06770

CLIENT

OVERALL SITE LAYOUT PLAN

NAUGATUCK INDUSTRIAL COMMONS
PHASE III
LANXESS SITE IMPROVEMENTS

NAUGATUCK CONNECTICUT

CIVIL C1

CORNERSTONE PROFESSIONAL PARK, SUITE D-101
43 SHERMAN HILL ROAD
WOODBURY (203) 266 - 0778 CONNECTICUT

STATE OF CONNECTICUT
CURTIS C. JONES
No. 21208
LICENSED PROFESSIONAL ENGINEER

DRAWN: BB APPROVED: CJ
SCALE: 1" = 100'
DATE: 17 MAY 23
PROJ. NO.: 3535
CADD FILE NAME: 3535
DRAWING NO.:

Figure 4

TABLES

Table 1
Organizational Chart

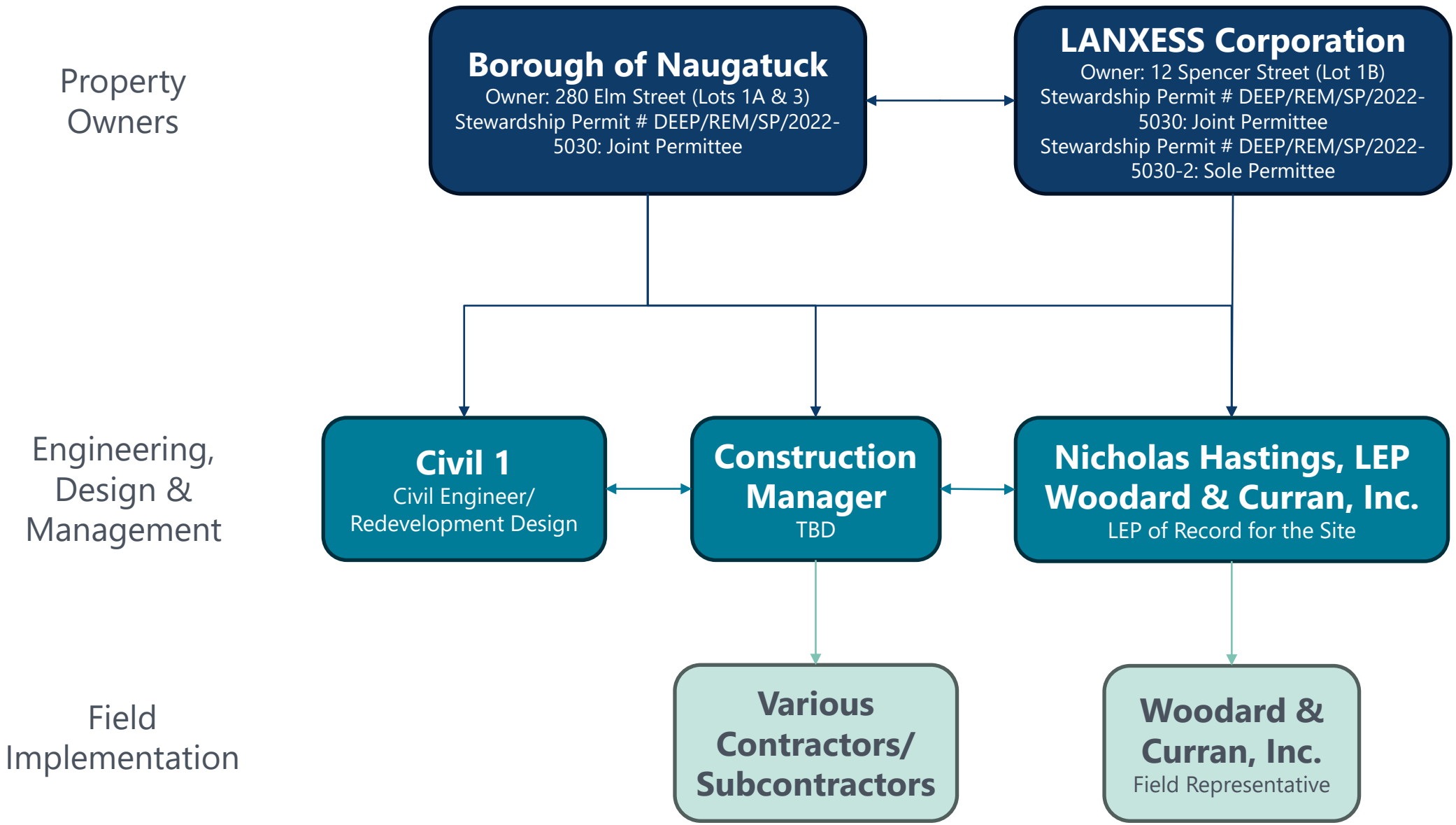


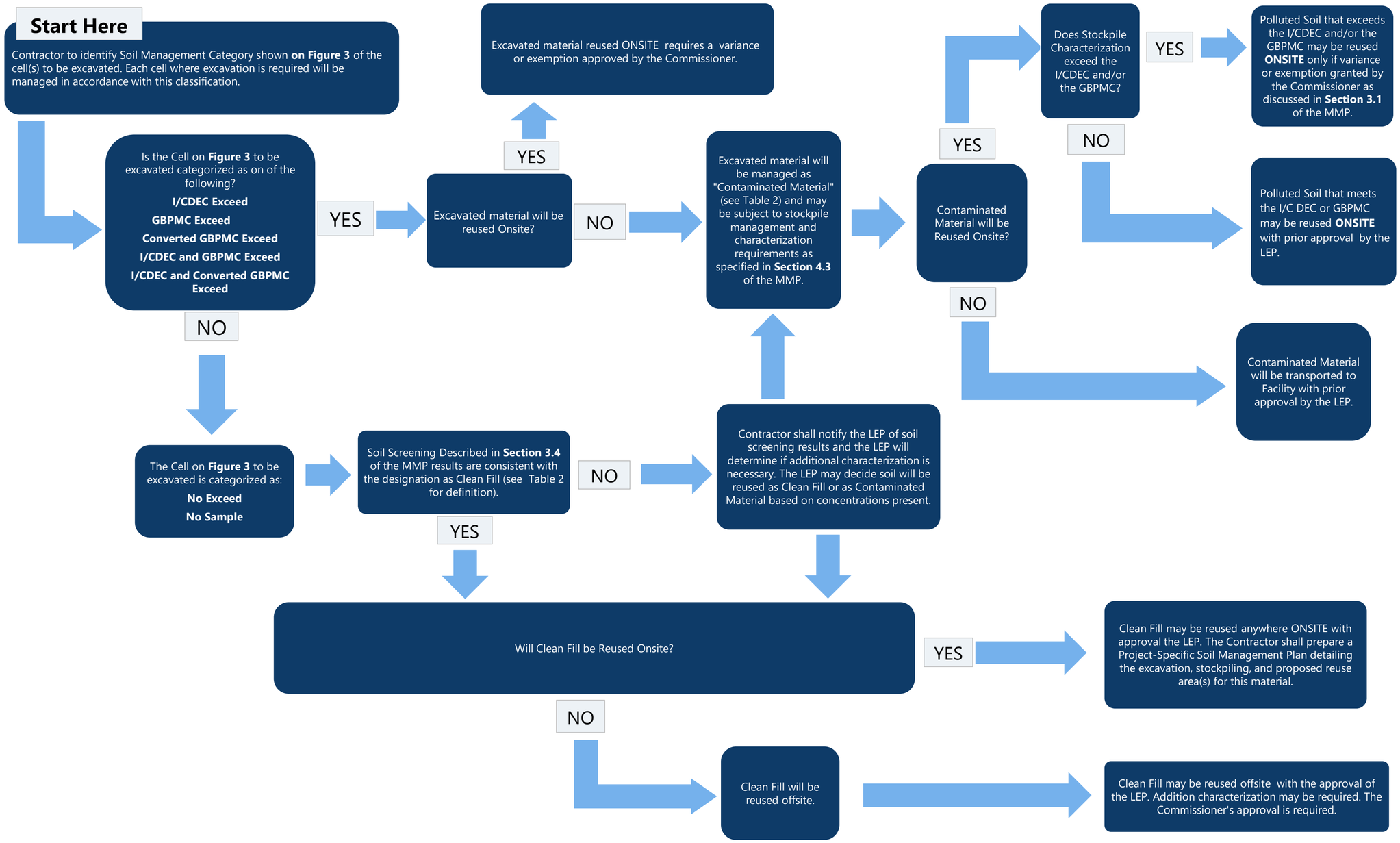
Table 2
Materials Management Plan
Former Uniroyal Chemical Facility
Naugatuck, Connecticut

Excavated Material	Concentrations Detected	RSR Reuse Categories	Reused onsite provided that:	Reused or Transported Offsite
Contaminated Material	Exceeds I/CDEC and/or GBPMC	Will not or cannot be reused in accordance with RSRs[1].	Not Applicable	For disposal at a permitted facility.
		Polluted Soil	A variance from the criteria is granted by rendering the soil inaccessible [22a-133K-2(b)(3)] and/or environmentally isolated [22a-133k-2(c)(5)].	Not Applicable
			A exemption from the criteria is granted through the use of an engineered control [22a-133k-2(F)(2)].	Not Applicable
Clean Fill	Exceeds RDEC and/or GAPMC but meets the I/CDEC or GBPMC.		The underlying soil and groundwater at the reuse area are already effected by a release of a similar substance.	May be reused offsite with prior approval from the LEP and the Commissioner's written approval. Additional characterization may be required.
	All concentrations below the RDEC and GAPMC		The polluted soil does not contain PCBs. The Commissioner's approval is required for reuse of soil containing PCBs.	May be reused offsite with prior approval from the LEP and the Commissioner's written approval. Additional characterization may be required.
	Nothing has been detected above background except low concentrations attributed to virtually inert asphalt fragments.	Inert Material	Field screening results support determination as Clean Fill - may be reused onsite without restriction.	May be reused offsite with approval from LEP. Additional characterization may be required.
	Nothing detected above background	Natural Soil	Field screening results support determination as Clean Fill - may be reused onsite without restriction.	May be reused offsite with approval from LEP. Additional characterization may be required.

Terms	Definitions	Source
Contaminated Material	Soil containing substances that exceed the I/C DEC and/or the GBPMC.	Operationally defined under this Materials Management Plan
Clean Fill	"Clean fill" means (1) natural soil (2) rock, brick, ceramics, concrete, and asphalt paving fragments which are virtually inert and pose neither a pollution threat to ground or surface waters nor a fire hazard and (3) polluted soil as defined in subdivision (45) of subsection (a) of section 22a-133k-1 of the Regulations of Connecticut State Agencies which soil has been treated to reduce the concentration of pollutants to levels which do not exceed the applicable pollutant mobility criteria and direct exposure criteria established in sections 22a-133k-1 through 22a-133k-3 of the Regulations of Connecticut State Agencies and which soil is reused in accordance with R.C.S.A. subdivision (3) of subsection (h) of section 22a-133k-2 of such regulations.	22a-209-1 of the Regulations of Connecticut State Agencies
Polluted Soil	"Polluted Soil" means soil affected by the release of a substance at concentrations above the laboratory reporting limits for such substance.	22a-133k-1(a)(65) of the RSRs
Inert Material	As stated in definition of Clean Fill	22a-209-1 of the Regulations of Connecticut State Agencies
Natural Soil	"Natural soil" means soil in which all substances naturally occurring therein are present in concentrations not exceeding the concentrations of such substance occurring naturally in the environment and in which soil no other substance is analytically detectable.	22a-133k-2(h)(4) of the RSRs
Inaccessible Soil	“Inaccessible soil” means soil that meets one of the following conditions: (A) Is more than four feet below the ground surface; (B) Is more than two feet below a paved ground surface comprised of bituminous concrete that, at a minimum, is three inches thick or reinforced concrete that, at a minimum, is four inches thick; (C) Is beneath a building or other permanent structure; or (D) Is polluted fill: CGS 22a - 133k - 1 to 22a - 133k - 3 Page 5 | 117 This version has been prepared to highlight alterations made to the existing regulation, and is for informational purposes only. Any conflict between this document and the official text of the proposed amendments entered into the State’s E-Regulations system shall be resolved by referring to the official version, not this document. (i) Beneath a paved ground surface comprised of bituminous concrete that, at a minimum, is three inches thick or reinforced concrete that, at a minimum, is four inches thick; and (ii) That exceeds the applicable direct exposure criteria solely due to: (I) Semi-volatile organic substances or petroleum hydrocarbons that are normal constituents of bituminous concrete; or (II) Metals at in concentrations that are equal to or less than two times the applicable direct exposure criteria.	22a-133k-1(a)(39) of the RSRs
Environmental Isolated	"Environmental isolated soil" means polluted soil which is above the seasonal high water table and is not subject to infiltration in accordance with Section 22a-133k-2(c)(5)(A) of the RSRs, thereby preventing the leaching of pollutants from such soil into the groundwater.	22a-133k-1(a)(20) of the RSRs
I/CDEC	Industrial/Commercial Direct Exposure Criteria	22a-133k-2(b)(2) of the RSRs
GBPMC	GB Pollutant Mobility Criteria	22a-133k-2(c)(1) of the RSRs.

Notes:
1 - Soil that is classified as Hazardous Waste or Special Waste may not be reused under the RSRs. Polluted Soil that will not be reused in accordance with the RSRs is a solid waste and must be disposed of in a permitted facility.

Table 3
Materials Managment Plan
Former Uniroyal Chemical Facility
Naugatuck, Connecticut



APPENDIX A: CT DEEP CONTAMINATED SOIL AND/OR SEDIMENT MANAGEMENT GP

Attachment D

DRAFT

REMEDIAL ACTION PLAN

Former Uniroyal Chemical Facility
280 Elm Street and
12 Spencer Street
Naugatuck, CT

June 2023

Middlesex Corporate Center
213 Court Street | 4th Floor
Middletown, Connecticut 06457
800.426.4262

woodardcurran.com

LANXESS Corporation & Borough of Naugatuck

June 30, 2023

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FIGURES

APPENDICES

1. INTRODUCTION

Woodard & Curran, Inc. (W&C) has prepared this Remedial Action Plan (RAP) for the LANXESS Corporation (LANXESS) and Borough of Naugatuck (BON) to address soil and groundwater remediation of the former Uniroyal Chemical Facility located at 280 Elm Street, Naugatuck, Connecticut (the Site). A Site Location Map is provided as **Figure 1**. On August 18, 2022, a portion of the Site was transferred from LANXESS to BON (Lot 1A and Lot 3; identified as 280 Elm Street). As a condition of the transaction, Stewardship Permit (DEEP/REM/SP/2022-5030) identifying LANXESS and BON jointly as permittees was approved and issued by the Commissioner of the Connecticut Department of Energy and Environmental Protection (CTDEEP). A portion of the Site was retained by LANXESS, referred to as the "Retained Land" (Lot 1B) and is identified as 12 Spencer Street in Naugatuck, Connecticut. A separate Stewardship Permit (DEEP/REM/SP/2022-5030-2) was assigned to LANXESS for this parcel. Both Stewardship Permits are referred to collectively as "the Permits". Refer to **Figure 2** for the current parcel boundaries and ownership. This RAP applies to Lot 1B owned by LANXESS and Lots 1A and 3 owned by BON. Collectively, the Lots are referred to as "the Property".

The objective of this RAP is to meet the requirements set forth in Section II, Subsection A(2)(b) of both Stewardship Permits. This subsection requires that one or more documents be submitted detailing the remedial actions to address one or more environmental media at the Site and include:

- Identification of the area(s) of concern (AOC) to be remediated and a description of the areas and media to be remediated;
- Identification of alternatives considered;
- Identification and justification of the selected remedial approach;
- Proposed implementation plan and schedule to perform the selected remedial action and data gap investigation, if necessary;
- Identification and rationale supporting predesign investigation at an AOC;
- Identification of areas exceeding remedial criteria and a proposal for the investigation to collect additional characterization data needed to complete the remedial design to achieve compliance with CTDEEP Remediation Standard Regulations (RSRs); and
- Identification of ecologically based and human health-based criteria for sediment, an identification of all areas exceeding such criteria, and a proposed implementation plan and schedule addressing such areas.

A Quality Assurance Project Plan (QAPP) has been completed as required in Section II Subsection A(2)(c) [note: the Permits include two Subsections A(2)(b) so the second of these requiring the QAPP has been changed to A(2)(c) to avoid confusion] of the Stewardship Permits and is being submitted under separate cover. A Materials Management Plan (MMP) has also been completed in support of this RAP and is being submitted under a separate cover.

Consistent with this section of the Stewardship Permits, remedial activities will be conducted in a phased approach that will generally coincide with the redevelopment plans for the Site. Site activities anticipated

for Phase I of the redevelopment consist primarily of the construction of "LANXESS Drive", additional parking for Building 112, and the associated stormwater management system for these areas as shown on the sitewide redevelopment plan provided as **Figure 3**. This RAP includes the evaluation of alternatives and identification of the selected remediation approaches for AOCs directly impacted by the Phase I redevelopment plan and ongoing remedial actions.

Addenda to this RAP using the methods described herein will be submitted for review as details of the subsequent phases of redevelopment are established. Remediation of AOCs containing polychlorinated biphenyl (PCB) contamination are subject to separate RAPs under review by U.S. Environmental Protection Agency (USEPA) and CTDEEP. A summary of all AOCs located on the Site is provided in **Table 1**.

BON intends to subdivide Lots 1A and 3 into parcels for redevelopment. The most recent sitewide redevelopment plan is included as **Figure 3**. As part of the purchase and sale agreement, the two parties agreed to the following environmental conditions:

- BON has agreed to investigate and remediate the Property in accordance with the Abandoned Brownfield Cleanup Program, C.G.S. Section 32-768 (the "Brownfield Program"). An application to the Brownfield Program was submitted and is awaiting review by CTDEEP.
- With approval from CTDEEP, an Environmental Use Restriction (EUR) prohibiting future residential use at the Site will be established.
- With approval from CTDEEP, an EUR will be placed on portions of the Site where soil has been rendered inaccessible and/or environmentally isolated.
- Soil in a release area that exceeds the criteria established in the RSRs, where an EUR will not be used to meet compliance as discussed above, will be excavated and characterized, for reuse or disposal in accordance with Section 22a-133k-2(h) of the RSRs and in general compliance with the General Permit for Contaminated Soil and/or Sediment Management (expired).

Remedial activities including soil excavation, the removal of subsurface structures (e.g., former building footings, slabs, etc.), confirmatory sampling, backfilling, disposal characterization, transportation, and disposal of contaminated soils will be performed. This RAP details how these remedial activities will be performed and describes the necessary administrative actions associated with such measures.

1.1 Site Description

The Site is located on approximately 86 acres of industrial/commercial (I/C) property along the west bank of the Naugatuck River in the Borough of Naugatuck, Connecticut. The Site is bordered on the south by the Naugatuck Publicly Owned Treatment Works (Naugatuck-POTW) and the Naugatuck State Forest, on the north and west by the Borough of Naugatuck, and on the east by the Naugatuck River. The New York, New Haven & Hartford Railroad, runs north-south through the Site bisecting the upland portion from the riverfront area.

The majority of the Site is currently owned by BON, following the property transfer (Lots 1A and 3) from LANXESS on August 18, 2022. An approximately 9-acre parcel (Lot 1B) was retained by LANXESS for continued operations. Refer to **Figure 2** for the current parcel boundaries and ownership.

1.2 Environmental Setting

Multiple subsurface investigations have confirmed the presence of stratified drift as the predominant component of overburden materials at the Site. The overburden generally consists of fine to coarse sand and gravel (up to approximately one inch in diameter) and occasional boulders that are two to six feet thick. The stratified drift lies atop bedrock, which generally defines surface contours in the western and central sections of the Site. Drilling during previous investigations indicated that bedrock is present at depths of approximately 26 feet to 37 feet below grade in the western, elevated portion of the Site (AOC-11: Tire Lot) and is exposed as the face of a vegetated "cliff" that forms the drop-off at the eastern edge of the Tire Lot. From the foot of the cliff (see location of MW-120 shown on **Figure 2**), to the east (approximate location of EW-1), bedrock depth increases from 23 feet below grade to about 40 feet below grade. The surface of bedrock then plunges steeply as it continues east from EW-1 to the Naugatuck River, reaching a depth of over 110 feet in portions of the South Yard.

The bedrock surface is relatively competent from the Tire Lot (AOC-11) in the elevated western portion of the Site, east of Building 101. Deep wells, installed to the east of Building 101 and along the Naugatuck River showed competent bedrock to be overlain by a zone of fractured or weathered bedrock of high permeability. Fractured bedrock of this nature was found at MW-121 in front of Building 317, at MW-122 and MW-123, and in all deep wells along the Naugatuck River. This zone of fractured rock ranged in thickness from 17 feet to over 40 feet thick at MW-116. Competent bedrock was not encountered to a depth of 140 feet below ground surface (bgs) during the installation of MW-116. Overburden directly above the fractured bedrock typically consisted of fine to coarse gravel, with poorly sorted fine to coarse sand and boulders.

Site groundwater flow is generally in an easterly to southeasterly direction toward the Naugatuck River. Groundwater on the Site and in the surrounding area is classified by the CTDEEP as "GB", indicating groundwater within a historically highly urbanized area, or an area of intense industrial activity, where public water supply service is available. Such groundwater may not be suitable for human consumption without treatment due to waste discharges, spills, leaks of chemicals, or land use impacts. The CTDEEP's goal for GB areas is to control discharges to soil and groundwater in order to maintain the current water quality.

The Naugatuck River abuts the eastern boundary of the Site. This watercourse is a Class B water body. Designated uses for this class include: recreational use; fish and wildlife habitat; agricultural and industrial supply; and other legitimate uses, including navigation.

Available groundwater data indicate that the aquifer beneath the Site discharges to the Naugatuck River. Depth to groundwater is between 4 feet (MW-182) and over 50 feet (MW-129) bgs.

2. SITEWIDE CONCEPTUAL SITE MODEL

2.1 Manufacturing History

Between 1904 and the 1930s, this facility was involved primarily in the reclamation of rubber. During the 1930s, other chemical manufacturing processes were introduced, including the production of aniline used as a vulcanization accelerator, and other antioxidants and accelerators used in the production of rubber, and agricultural chemicals. In the 1940s, synthetic rubber and latex production was initiated and continued through the mid-1970s. From that time until production ceased in December 2002, the facility produced various agricultural, rubber, and specialty chemicals. The major areas of production were located approximately in the center of the Site.

Multiple releases have occurred at the Site as a result of chemical use and storage associated with the various historic manufacturing processes that occurred at the facility. In general, releases are known to have occurred from temporary drum storage areas prior to disposal and from storage tanks and waste pits used to temporarily hold waste materials. Releases from storage tanks containing raw materials and manufactured materials have also been documented.

Some of the AOCs located on the Site are associated with the historic practice of disposing of waste onsite, which was acceptable at the time. Prior to 1947, solid wastes generated at the facility were disposed of onsite, principally in the South Yard and the Tire Lot, as shown on **Figure 2**. According to the Phase II Environmental Site Assessment (1995), solid waste disposed of onsite included aniline sludge, agricultural chemical waste, rubber chemical wastes, and fly ash from the coal-fired boilers. After 1947, waste generated during the manufacturing process was transported offsite for disposal. Beginning in 1976, waste was manifested to outside disposal contractors for disposal in accordance with Resource Conservation and Recovery Act (RCRA) regulations.

Based on the environmental investigation activities conducted and historical activities known to have occurred onsite, a comprehensive list of AOCs has been developed. A total of 77 AOCs have been identified. A summary of the AOCs, including anticipated remedial actions, is presented in **Table 1,** and locations of each AOC are shown on **Figure 2**.

Two separate AOCs at the Site are impacted with PCBs. Remediation of these areas will be performed in accordance with PCB Cleanup and Disposal Plans reviewed and approved by USEPA and CTDEEP. One of these plans (for Building 317) has already been submitted and approved (Woodard & Curran, 2010). The second plan for a portion of the Site known as the Combined PCB Area (AOC-75) is under review by the USEPA (Woodard & Curran, 2021b). LANXESS is preparing an addendum to the currently approved plan for Building 317 to incorporate adjacent soil investigated as part of the 2020 Site investigation activities (Woodard & Curran, 2020c). Both of these plans will be submitted for approval prior to development and active remediation. Remediation will be performed in accordance with the RSRs and USEPA-approved PCB Cleanup and Disposal Plans.

As summarized in **Table 1**, many AOCs have been demonstrated to not require any further active remediation in order to achieve compliance with the RSRs. It is anticipated that portions or all of select AOCs requiring remediation can be successfully addressed through one or more of the following means: consolidation of contaminated soils beneath an engineered control, rendering it inaccessible and/or environmentally isolated, in conjunction with an Environmental Land Use Restriction (ELUR); and/or

excavation and offsite disposal of polluted material. There are no known data gaps that have the potential to change these elements of the Conceptual Site Model.

2.2 Potential Receptors

Potential receptors at the Site include workers at the existing LANXESS facility and at the facilities to be constructed during redevelopment, and utility workers who may conduct subsurface maintenance of utilities located at the Site and the Naugatuck River. The nearest potable groundwater usage is domestic wells located approximately 1.7 miles downgradient of the Site.

2.3 Potential Pathways to Receptors

Potential pathways to receptors include the following:

- Inhalation of particulate matter,
- Ingestion of soil, water, or biota, and
- Dermal absorption from water or soil.

Vapor intrusion to current buildings located at the Site is not considered a concern based on the results of soil and groundwater sampling, which demonstrates that there are no volatile organic compounds (VOCs) present at concentrations above applicable RSR criteria in soil or groundwater beneath existing buildings that would have the potential to volatilize into indoor air. Future building locations will be assessed as the redevelopment plans are completed and where appropriate, the risk of potential vapor intrusion issues will be managed using an engineered control, as necessary.

2.4 Nature and Extent of Contamination

Identified constituents of concern (COCs) for the Site are related to historic production of various agricultural, rubber, and specialty chemicals and include VOCs (primarily acetone), semivolatile organic compounds (SVOCs) (primarily aniline and n-DPA), metals (including cadmium, copper, and zinc), petroleum hydrocarbons (PAHs), and PCBs. Refer to **Table 1** for a summary of constituents detected in soil at the Site. A complete list of COCs can be found in the QAPP submitted under separate cover.

2.4.1 Nature of Potential Release and Potential Release Mechanism/Location

Details of releases, including mechanisms and locations of AOCs, are summarized in **Table 1**. Releases at the Site have been documented from: subsurface waste pits; surface releases from waste storage areas; subsurface structures; storage tanks containing raw materials; and manufactured materials. Mechanisms include both accidental releases to surface and leakage through the subsurface structures and conveyance structures.

3. REMEDIATION OBJECTIVES

The primary objective of this RAP is to facilitate remediation of soil and groundwater at the Site in order to achieve compliance with the RSRs, as required under the Stewardship Permits. To accomplish this objective, investigation results have been compared to the applicable RSR criteria. The appropriate RSR criteria that were evaluated with respect to the Site are discussed below.

3.1 Site Classification and Regulatory Standards

The Site is located in a GB groundwater classification area. Groundwater within GB areas is classified by the CTDEEP's Water Quality Standards as groundwater presumed to be degraded, and not suitable for direct human consumption. No public or private water supply wells were identified within a quarter-mile radius of the Site. The CTDEEP's goal for GB areas is to control discharges to soil and groundwater in order to maintain the current water quality.

The CTDEEP has established the RSRs to guide site investigations and remedial actions, as detailed below. Specific numerical standards applicable to a site are based on the RSRs and groundwater classification. Analytes detected at the Site for which criteria have not been established are identified in the RSRs as Additional Polluting Substances (APS). Criteria approved for state-wide use has been developed by CTDEEP and is provided in the APS Fast-track form. A Fast-track form was submitted for the Site requesting use of APS detected at the Site. Site-specific criteria were developed for APS detected on the Site that do not have values provided on the Fast-track form.

3.2 Soil Standards

Section 22a-133k-2 of the RSRs establishes the following two criteria that apply to soil at the Site:

- **Direct Exposure Criteria (DEC)**, which is established to protect human health from exposure to contaminants in soil. With some exceptions, these criteria apply to soil located within 15 feet of the ground surface. Polluted soil must be remediated to a concentration that is consistent with the Residential Direct Exposure Criteria (RDEC), unless the Site is used exclusively for industrial or commercial purposes. In such a case, the less stringent I/C DEC may be used, provided an ELUR is recorded to ensure that the Site is not used for residential purposes in the future.

- **Pollutant Mobility Criteria (PMC)**, which is established to protect the aquifer from the potential for contaminants to mobilize into groundwater. As an option, the RSRs allow for the comparison of results obtained by synthetic precipitate leachate procedure to the Groundwater Protection Criteria multiplied by a dilution factor for organic substances other than PCBs.

APS are analytes detected for which no criteria have been established in the RSRs. A form containing values approved for state-wide use (APS Fast-track) has been submitted to the CTDEEP. Site-specific approvals were received for some compounds that do not have established values or values for state-wide use.

3.3 Groundwater Standards

Section 22a-133k-3 of the RSRs establishes the following two criteria for groundwater in GB classified areas:

- **Surface Water Protection Criteria (SWPC)**, which applies to a groundwater plume at the point where the plume discharges to a surface water body. These criteria are established to ensure that surface water quality is not impaired by the discharge of contaminated groundwater into a surface water body at contaminant concentrations above the Water Quality Standards.

- **Groundwater Volatilization Criteria (GWVC)**, which are established to protect human health from volatile substances in shallow groundwater that may migrate from groundwater and enter overlying buildings. The Volatilization Criteria for groundwater vary depending on whether the Site is used for residential or I/C purposes. In cases where the less stringent I/C Volatilization Criteria (I/C VC) is used, an ELUR must be implemented.

3.4 Ecological Risk Assessment

Two rounds of ecological risk assessment sampling were conducted at and adjacent to the Site. The initial sampling was reported in the Ecological Risk Assessment submitted on September 29, 2003. Subsequently, during the period of October 4, 5, and 6, 2004, a total of 22 sediment samples were collected from designated locations along the Naugatuck River. Sediment samples were analyzed for VOCs, SVOCs, metals, total organic carbon, and grain size. The results of this investigation were used to develop a more robust and complete data set as recommended by the Ecological Risk Assessment submitted on September 29, 2003. The conclusions of the resulting Supplemental Naugatuck River Ecological Risk Assessment (Woodard & Curran, 2008) support the findings of that Ecological Risk Assessment.

The results from the sediment sampling described above were used to evaluate potential ecological risks to benthic macroinvertebrates in the Naugatuck River. This evaluation was conducted in accordance with the methodology of the 2003 Ecological Risk Assessment of the Naugatuck River and represents an update of that report. Three compounds, n-DPA, acetone, and arsenic, were determined to be potentially Site-related and were evaluated by comparing detected values to ecological benchmarks. Benchmark exceedances were converted to hazard quotients, with values >1.0 reflecting a potential for risk. Maximum hazard quotients were 4.4 for n-DPA, 5.4 for acetone, and 96.9 for arsenic. However, concentrations above benchmarks were present in only one or two samples, which were widely separated in the river. Because these exceedances were generally single isolated occurrences, no significant ecological risk is likely to be associated with these Site-related compounds in sediments.

Based on these findings, no remediation of river sediment appears to be warranted. This area was identified following discussions held with CTDEEP in 2017 regarding ecological risk assessment at the Site. Based on these discussions, groundwater in the vicinity of MW-3 was targeted for further assessment of metals (cadmium, copper, and zinc), and this metals-impacted area was designated as AOC-76. It is believed the source of metals impact may be due to degraded fill material containing metals placed in AOC-76. The degraded fill was likely placed prior to the early 1900s.

In situ remediation activities have been conducted in AOC-76 under a Temporary Authorization Permit (TA Permit). Groundwater monitoring has been completed quarterly as required under the TA Permit and will continue for 2023. Full-scale design of the in situ (see Section 4.9 of this RAP) is currently underway, and a request for modification of the existing TA Permit is expected to be submitted for approval.

4. REMEDIAL APPROACH AND ACTIVITIES

This section describes the remedial activities that may be implemented to address one or more environmental media and meet the requirements of the RAP identified in the Stewardship Permits. Locations of the Site with soils that exceed applicable RSR criteria will be excavated and contaminated soils will be managed in a manner consistent with the RSRs. Confirmatory soil sampling will be performed at the limits of the excavations to demonstrate compliance with the RSR criteria as necessary, and details of the sampling plan will be provided as future addenda to the RAP. Following remedial activities described in this RAP, a Remedial Action Completion Report will be prepared documenting remedial measures that were completed at the Site and will present the next steps to be taken (e.g., post-remediation groundwater monitoring requirements and preparing EUR applications or other administrative requirements).

The release areas to be remediated include the AOCs Presented in Section 7 of this RAP and summarized in **Table 1**. RAP addenda for subsequent phases of redevelopment will also utilize the remedial approaches and activities identified below.

4.1 Use of the Industrial/Commercial Direct Exposure Criteria

The RSRs allow the I/C DEC to be applied to sites where residential activities have been prohibited through the use of an ELUR. Because the remediation of AOCs containing PCB are subject to additional requirements imposed, the RSRs have different requirements based the presence or absence of PCBs.

4.1.1 I/C DEC for Non-PCBs Soil

According to Section 22a-133k-2(b)(2)(A), this remedial action may be applied to polluted soil, with the exception of soil that is polluted with PCBs. A parcel is eligible for use of the I/C DEC provided that:

- The subject area must not currently be used for any residential activities, which is defined in the RSRs as:
    - A place intended for people to live, including but not limited to, a residence, dwelling, house, apartment, condominium, nursing home, or dormitory.
    - A pre-school, primary school secondary school, day care center, playground, or outdoor recreational area.
- Access to the parcel is limited to individuals who work at or are visiting the parcel for I/C activities.
- An EUR is in effect for the subject area that: prohibits future residential activities from the subject area and requires access is restricted to individuals working or visiting the subject area for I/C activities.

Based on the Phase I redevelopment plan included as **Figure 3**, the I/C DEC for non-PCBs soil can be applied anywhere on the Site.

4.2 Conditional Exemptions – Direct Exposure Criteria

The RSRs allow the conditional exemption from the requirements to remediate polluted soil to the I/C DEC under certain circumstances, provided that specific requirements are met. Conditional exemptions may be implemented as remedial activity to address at least one environmental media at one or more AOCs.

4.2.1 Inaccessible Soil for Non-PCBs Soil

As described in Section 22a-133k-2(b)(3), soil polluted with substances other than PCBs that is within 15 feet of the ground surface may be rendered inaccessible using an EUR if it meets the definition of "inaccessible" in Subsection 1(a) of the RSRs, provided it is:

- More than four feet bgs,
- Beneath pavement and is more than two feet below the paved surface,
- Beneath a building or permanent structure, or
- Is polluted fill.

Assuming that one of the above statements applies, this remedial action may be used for soil polluted with a substance other than PCBs that exceeds the I/C DEC anywhere on the Site.

4.2.2 Incidental Source

Section 22a-133k-2(b)(5) of the RSRs allow for the conditional exemption from the DEC of soil polluted with metals, PAHs, or SVOCs provided that the pollution is the result of:

- An incidental release due to the normal operation of motor vehicles, or
- Normal paving and maintenance of consolidated bituminous concrete surface.

Assuming one of the conditions above is met, this remedial action may be applied anywhere on the Site.

4.3 Conditional Exemptions – Pollutant Mobility Criteria

The RSRs allow the conditional exemption from the requirements to remediate polluted soil to the PMC under certain circumstances, provided that specific requirements are met. Conditional exemptions may be implemented as remedial activities to address at least one environmental media at one or more AOCs.

4.3.1 PMC Environmentally Isolated

Section 22a-133k-2(c)(5)(A) allows for the conditional exemption of soil that has been rendered environmentally isolated. Environmentally isolated soil is defined in Subsection 1(a) of the RSRs as polluted soil that is above the seasonal high-water table, and not subject to infiltration through the use of an impermeable surface or structure. This remedial action may be applied anywhere at the Site provided that the above conditions are met, and VOCs present above the Class GA PMC have been reduced to the maximum extent possible.

4.3.2 Polluted Material

As specified in Section 22a-133k-2(c)(5)(B), polluted material at a release area is not required to be remediated to the PMC, provided that the following conditions are met:

- The pollution is due to coal ash, wood ash, and/or coal fragments;
- The material is not polluted with VOCs at concentrations that exceed the GB PMC or exceed the soil vapor volatilization criteria;
- Has achieved compliance with the applicable I/C DEC;
- A public water source is available within 200 feet of the parcel; and
- The placement of polluted material used as fill was not prohibited by law at the time of placement.

Assuming the above conditions are met, this remedial action may be applied anywhere on the Site.

4.3.3 Subject to Infiltration

Soil polluted with substances other than VOCs is not required to be remediated to the PMC provided the following provisions established in Section 22a-133k-2(c)(5)(C) are met:

- 80 percent of the mass has been subject to infiltration for at least five years.
- Groundwater results, collected in accordance with the RSRs, are equal to less than the SWPC.

This remedial action may be used anywhere on the Site where these conditions are met.

4.3.4 Incidental Sources

Section 22a-133k-2(c)(5)(D) of the RSRs allow for the conditional exemption from the PMC of soil polluted with metals, petroleum hydrocarbons, or SVOCs provided that the pollution is the result of:

- An incidental release due to the normal operation of motor vehicles, or
- Normal paving and maintenance of consolidated bituminous concrete surface.

Assuming one of the conditions above is met, this remedial action may be applied anywhere on the Site.

4.4 Public Roadway Variance

A variance from the DEC and/or the PMC may be granted by the Commissioner under Section 22a-133k-2(f)(3) of the RSRs for polluted soil beneath a public roadway. To be eligible for a variance under this section:

- The pollution must be beneath an existing public roadway;
- The applicant must demonstrate that the removal of soil from beneath the roadway is neither practical nor prudent; and

- That granting the variance will not endanger public health or the environment.

This remedial action may be applied where these conditions are met.

4.5 Non-Aqueous Phase Liquid Variance

Section 22a-133k-2(g) of the RSRs require that non-aqueous phase liquid (NAPL) be removed to the extent practicable. Under this section, the Commissioner may grant a variance from this requirement provided that:

- There is no migration of such NAPL;
- If NAPL is present, PCBs have been remediated in compliance with 40 Code of Federal Regulations Part 761;
- Compliance with the applicable groundwater criteria has been achieved; and
- If VOCs are present at or above the seasonal low water table and beneath a building without a vapor mitigation system, compliance with volatilization criteria for soil vapor has been achieved.

This remedial action may be applied anywhere at the Site where these conditions are met.

4.6 Engineered Control Variance

Section 22a-133k-2(c)(2) allows an engineered control variance to be approved by the Commissioner, provided that one or more of the following statements is true:

- The Commissioner authorizes the disposal of solid waste or polluted soil at the subject area;
- The soil is polluted with a substance that is technically impracticable;
- The Commissioner has determined that the removal of the substance(s) would create an unacceptable risk to human health;
- A Licensed Environmental Professional (LEP) has determined that the cost of remediating the polluted soil in the subject area is significantly greater than the cost of installing and maintaining an engineered control; and/or
- The Commissioner has determined that the cost to remediate the polluted soil in the subject area significantly outweighs the risk to the environment and human health if the engineered control were to fail.

This remedial action may be used to render soil inaccessible, and/or environmentally isolated anywhere on the Site.

4.7 Widespread Polluted Fill

Geographically extensive fill material present at a parcel may be eligible for a variance under Section 22a-133k-2(f) of the RSRs if the following provisions are met:

- The variance does not include VOCs.
- The fill material does not impact existing or potential public water supply resources or private drinking water wells.
- Any substance released into such fill will be remediated to concentrations equal to or less than the concentrations of those substances already in the fill.
- Placement of fill material was not prohibited by law at the time.
- The fill material will remain on the parcel.
- The owner of the parcel agrees to the variance and an EUR is in effect prohibiting the disturbance of the fill material.

This remedial action may be used anywhere on the Site where the conditions specified above are met.

4.8 Excavation of Soil

Soil excavated from the AOCs will be managed in accordance with the MMP prepared for the Site. Soil will be assigned one of the five designations below based on nearby analytical results:

1) The area has been sufficiently characterized and soil sample results are all below all applicable criteria.
2) The area has been sufficiently characterized and soil results exceed one or more I/C DEC.
3) The area has been sufficiently characterized and soil results exceed one or more GB PMC.
4) The area has been sufficiently characterized and soil results exceed one or more I/C DEC **and** one or more GB PMC.
5) Predesign investigation is required to sufficiently characterize the area.

Based on these designations, the excavated soil may be reused onsite, reused offsite, or transported to a permitted facility for disposal.

4.8.1 Soil to be Reused Onsite

Polluted soil is defined in the RSRs as "soil affected by a release of a substance at a concentration above the laboratory reporting limit". Given that the Site consists of multiple parcels, onsite reuse of polluted soil may include the reuse of polluted soil on the parcel from where it was excavated, or relocation of polluted soil to a different parcel. Under Section 22a-133k-2(h)(3)(B), polluted soil may be reused on the same parcel from where it was excavated or on a different parcel, affected by the same release or a release containing similar substances, with the *Commissioner's approval* provided that:

- Polluted soil that exceeds the DEC or PMC is rendered inaccessible, environmentally isolated, or is subject to an engineered control.

- The requirements of Section 22a-133k-3(c)(3) *Exemption from Volatilization Criteria through Vapor Mitigation* apply to polluted soil containing VOCs other than petroleum hydrocarbons that are:
    - at concentrations greater than the Class GA PMC, or
    - will be placed beneath a building that overlies an area already affected by a release of VOCs.
- If the polluted soil contains PCBs, the Commissioner has issued written approval in accordance with Section 22a-467 and the engineered control variance discussed in Subsection (f)(2) of the RSRs.
- If polluted soil is to be reused on a different parcel, written approval is required.

Section 22a-133k-2(h)(3)(A) of the RSRs allow for reuse of polluted soil on the same parcel when *notice is provided to the Commissioner*, provided that:

- The concentrations of substances in the soil are equal to or less than the I/C DEC;
- Soil with concentrations of substances that exceed the GA PMC, but is less than or equal to the GB PMC, is placed over soil and groundwater that has already been affected by a release;
- Such soil is not to be reused beneath a building; and
- Does not contain PCBs.

Excavated polluted soil containing substances at concentrations below the I/C DEC and GB PMC may be reused on the same parcel if notice is provided to the Commissioner, or on a different parcel onsite with the Commissioner's approval, provided the requirements above are met. Polluted soil containing substances at concentrations above the I/C DEC or GB PMC may be reused onsite with the Commissioner's approval, provided the requirements above are met.

Soil containing substances at concentrations that do not exceed the naturally occurring concentrations and do not contain other substances at concentrations greater than the laboratory reporting limit, may be reused as "natural soil" under Section 22a-133k-2(h)(4) of the RSRs. Soil that meets the definition of natural soil may be reused on any parcel onsite as part of this remedial activity.

4.8.2 Soil to be Reused Offsite

Depending on the redevelopment plan, it may be necessary to reuse soil on a different parcel located offsite. The requirements established in the RSRs are identical to the requirements identified above for reuse of polluted soil on a different parcel located onsite and require the Commissioner's approval.

This remedial option may be used to relocate polluted soil containing substances at concentrations less than or equal to the applicable criteria to a different parcel located offsite with approval from the Commissioner. Soil that meets the definition of natural soil does not require notification under the RSRs; however, soil relocated offsite under this remedial option will be documented in a manner consistent with the notification requirements for reuse of polluted soil on a different parcel. A temporary staging area located onsite or offsite may be utilized to facilitate the characterization of soil. The staging area will

comply with the best practices established in the expired General Permit. A discussion of soil management is provided in the MMP (Woodard & Curran, 2023a).

4.8.3 Soil to be Transported to Permitted Facility

Under Section 22a-133k-2(h), hazardous waste and special waste must be disposed of at permitted facilities. Hazardous waste is defined in Section 22a-448 of the Connecticut General Statutes (CGS), and the treatment, disposal, and transportation of hazardous waste must coly with Sections 22a-449(c)-101 through 119. Special waste is defined in Section 22a-209-1 of the Regulations of the Connecticut State Agencies. Hazardous waste and special waste excavated from the Site will be transported and disposed of at a permitted facility.

4.9 In Situ Remediation

In situ remediation may be conducted at specific AOCs to target pollution from a specific release. Examples of remediation techniques that may be utilized at the Site include chemical oxidation, chemical reduction, and bioremediation. Each of these remedial actions require a General or TA Permit allowing the discharge of substances to the subsurface for the purpose of remediation. In situ remedial actions conducted at the Site will be reported in the Annual Stewardship Permit Report.

In situ remediation may occur anywhere at the Site. A permit application and the Commissioner's approval are required when discharging substances to the groundwater.

4.10 GW Extraction System

The extraction of groundwater from dedicated recovery wells (EW-2 and EW-3) has been successfully implemented at the Site since 2005 to control the discharge of the onsite plume to the Naugatuck River. The system is currently operating under the CTDEEP issued Discharge Permit (No. SP0000065) issued to BON. This remedial action is expected to continue at the Site until it can be demonstrated that the groundwater discharging from the Site no longer poses a risk to the water quality of the Naugatuck River.

4.11 DNAPL Recovery System

The recovery of dense non-aqueous phase liquid (DNAPL) from onsite monitoring wells (MW-161, MW-171, and MW-172) has historically occurred at the Site. DNAPL recovered is transported under manifest to a permitted waste facility for disposal. The system has effectively reduced the amount of recoverable product at all three monitoring well locations. Recoverable thickness of DNAPL has not been observed in Monitoring Wells MW-161 and MW-172 since 2020; however, DNAPL continues to be recovered from Monitoring Well MW-171. It is anticipated that this remedial action will continue until DNAPL has been removed to the extent practicable.

5. REMEDIAL ALTERNATIVES

This section describes the sitewide remedial activities as well as activities associated with the first phase of development that were evaluated during this process and the most expeditious schedule for performing each option as required under Section II, Subsection A(2)(b) of the Stewardship Permits. Remedial approaches for subsequent phases of redevelopment will be submitted as addenda to this document and will generally follow the phased approach of redevelopment. Alternative remedial actions considered for remediation of specific AOCs, along with the selected remedial action, will be discussed in the RAP addenda for subsequent phases of redevelopment.

5.1 Sitewide Direct Exposure Criteria

The Site consists of three parcels: Lot 1A (49.82 acres) and Lot 3 (19.44 acres) which are both owned by BON, and Lot 1B (9.07 acres) which is retained by LANXESS. The RSRs require that a release area be remediated so that the concentrations of substances in the soil are equal to or less than the RDEC The DEC apply to the soil within 15 feet of the ground surface located on these three parcels. As discussed in Section 4.1.1 of this RAP, the current uses and intended uses identified in the redevelopment plan are consistent with the definition of I/C established in the RSRs. Therefore, an EUR could be applied to one or more parcels prohibiting residential activities. This remedial option does not address soils containing PCBs, identified as a remedial action in Section 4.2.1 of this RAP. AOCs with soils containing PCBs will be managed under separate RAPs.

The remediation alternatives evaluated consist of applying the I/C RDEC to all three parcels (the "entire Site"), rendering that exceeds criteria on Lot 1B (LANXESS owned) and using an EUR to limit use of the Site to I/C activities, and use the RDEC currently applicable to the entire Site.

5.1.1 Remedial Alternative 1: Application of the I/C DEC to the Entire Site

This remedial action requires that an EUR restricting residential activities be applied to the entire Site (Lot 1A, Lot 1B, and Lot 3). Under this remedial alternative, an EUR would apply to the entire Site and access would be restricted to individuals who work at or are visiting the parcel for I/C activities across the Site as descried in Section 4.1.1 *I/C DEC for non-PCB soil*. The I/C DEC would be applied to the entire Site. This option consists of filing an EUR for each of the parcels for approval by the Commissioner. In our experience, the most expeditious schedule for the approval of an EUR restricting residential activity is 6 to 12 months to complete.

5.1.2 Remedial Alternative 2: Render Soil Inaccessible and I/C DEC

Soil exceeding the RDEC on Lot 1B (LANXESS owned) has been fully delineated and is limited to a sample from one boring (BD112-SB07) collected from beneath existing Building 112 that contained cobalt at a concentration greater than the RDEC. Refer to **Appendix A** for additional details regarding sample locations and analytical results associated with Building 112. Under this remedial alternative, the soil beneath Building 112 would be rendered inaccessible through an EUR as discussed in Section 4.2.1 *Inaccessible Soil for Non-PCBs Soil*. The I/C DEC would apply to the entire Site and access would be restricted to individuals who work at or are visiting the parcel for I/C activities. The RDEC would apply to Lot 1B, and the I/C DEC would apply to Lot 1A and Lot 3. This option consists of filing an EUR for each of the parcels and requesting an Inaccessible Soil Variance, which requires the approval of the building as an

engineered control. The most expeditious schedule for this option would be approximately 1 year to complete.

5.1.3 Remedial Alternative 3: Remediate to the RDEC

This remedial action alternative would require no residential restrictions, and the RDEC would apply to the entire Site. Soil contamination would be remediated to concentrations equal to or less than the RDEC for all areas subject to the DEC. Because the RDEC currently applies to the Site, this option does not require specific action.

5.2 AOC-48: Building 112 Laboratory Waste Storage Area

One sample (BD112-SB07) collected from beneath the building footprint contained cobalt at a concentration that exceeds the GB PMC. The release is limited to the soil immediately beneath the slab at this location. Cobalt was not detected in groundwater samples collected from Monitoring Well BD112-MW01, located immediately outside of the building footprint in the vicinity of the release area. Refer to **Appendix A** for additional details regarding sample locations and analytical results associated with Building 112.

5.2.1 Remedial Alternative 1: Environmental Isolate Soil Beneath Existing Building

This remedial action consists of rendering the soil environmentally isolated beneath the Building 112 footprint. As discussed in Section 4.3.1 of this RAP, Section 22a-133k-2(c)(5)(A) of the RSRs allows for a conditional exemption from the GB PMC provided that an EUR is in effect preventing infiltration beneath the building and the demolition of the building.

5.2.2 Remedial Alternative 2: Excavation of Soil Beneath Existing Building

This remedial action consists of excavating the soil beneath the existing building footprint as discussed in Section 4.3.1 of this RAP. The excavation of impacted material requires the removal of a portion of the slab to access the soil in the vicinity of Boring BD112-SB07. Excavation limit samples will be collected and analyzed for total and leachable cobalt.

6. REMEDIAL ACTIONS SELECTED

This section of the RAP describes the sitewide remedial activities as well as activities associated with the first phase of development selected during this process as required under Section II of the Stewardship Permits. Remedial approaches for subsequent phases of redevelopment will be submitted as addenda to this document and will generally follow the phased approach of redevelopment. Alternative remedial actions considered for remediation of specific AOCs, along with the selected remedial action, will be discussed in the RAP addenda for subsequent phases of redevelopment.

6.1 Sitewide Direct Exposure Criteria

Remedial Option 1, the application of the I/C DEC to the entire Site, was selected as the preferred option. Based on anticipated Site use and the analytical data collected from the Site, the use of the I/C DEC is appropriate and consistent with the RSRs. Pollutant concentrations from multiple AOCs are present at concentrations that exceed the RDEC, and the prohibition of residential activities is consistent with current and future land use.

An evaluation of alternative options for the selection of the remedial option identified above completed and the supporting justification as required under Section II, Subsection A(2)(b) of the Stewardship Permits is provided below:

- Option 1 allows for the use of consistent criteria across all parcels on the Site, simplifying soil management practices.
- Option 1 uses administrative controls to achieve compliance with the RSRs and minimizes the excavation and transportation of soil for reuse or disposal.
- Option 2 requires ongoing costs and reporting associated with the inspection and maintenance of Building 112 as an engineered control.
- Option 3 requires that the Site be remediated to the RDEC which is not consistent with Site reuse, zoning, and green remediation practices. This would require additional costs and is inconsistent with the Green Remediation Practices, as discussed in Section 8.

6.2 AOC-48: Building 112 Laboratory Waste Storage Area

Remedial Option 1, rendering the soil environmentally isolated, was selected as the preferred option to minimize the potential disruption to the building activities.

An evaluation of alternative options for the selection of the remedial option identified above was completed, and the supporting justification as required under Section II, Subsection A(2)(b) of the Stewardship Permit is provided below:

- Option 1 uses administrative controls to achieve compliance with the RSRs and eliminates disruptions to existing building activities.
- Option 1 requires the use of an EUR to prevent infiltration beneath the building.

- Option 2 requires removing a portion of the existing slab, which would be very disruptive to current activities conducted in this building.

7. IMPLEMENTATION OF REMEDIAL ACTIONS

The implementation of the selected sitewide remedial approach will apply to all AOCs at the Site where a release has been detected at concentrations that exceed the criteria established in the RSRs. The releases at each of the AOCs have been delineated. The following subsections present the Sitewide remedial approaches as well as summaries of ongoing remediation efforts at specific AOCs across the Site. Some AOCs will require additional remedial actions to achieve compliance with the RSRs and will be discussed in the RAP addenda for subsequent phases of redevelopment.

7.1 Sitewide Industrial/Commercial Direct Exposure Criteria

The use of the I/C DEC will apply to all AOCs where a release has occurred. For some AOCs, this remedial action will be the only remedial action required to achieve compliance with the RSRs. The following section is intended to meet the requirements established in Section II, Subsection A(b) of the Stewardship Permit. Specifically, subparts: (i) the identification of the AOC and, if applicable, former solid waste management unit (SWMU) where the remediation will take place, and (v) the identification of data gaps and the rational used for determining if further action is required. The status of the AOCs are discussed below and summarized in **Table 1**.

7.1.1 AOC-2: Hazardous Waste Storage Area #2

Beginning in 1980, the Hazardous Waste Storage Area #2 (Former SWMU#2 [W&C, 1993]) was a RCRA-permitted hazardous waste storage area consisting of a 15 feet by 40 feet enclosed area (Building 676) with a concrete floor with no drain. The enclosed area was used as a staging area for box trailer shipments of waste drums to offsite disposal facilities and for the storage of non-weatherproof containers. As of the 1992 assessment reported in the RCRA Facility Assessment (1993), no releases from this AOC had been reported and no visual evidence. The RCRA Closure Plan (2000) indicates that the facility ceased using SWMU#2 as of December 31, 1999. RCRA Clean Closure of the SWMU was achieved.

A total of 51 samples were collected from 20 locations. Samples collected from this AOC indicate that minor releases have occurred (i.e., VOCs, SVOCs) at this AOC; however, concentrations detected are below the applicable I/C DEC. Compliance with the DEC for this AOC will be achieved through the use of the EUR restricting residential use and using the I/C DEC as discussed in Section 4.1.1 of this RAP.

7.1.2 AOC-3: Building 54 Laboratory Sample Storage Unit

Laboratory waste generated in Building 81 was temporarily stored in Building 54 (AOC-3) prior to consolidation for offsite disposal. The area consisted of a 15 ft x 30 ft area with a cement floor. As of the 1992 assessment reported in the RCRA Facility Assessment (Woodard & Curran, 1993), there was no visual evidence.

A total of 18 samples were collected from 12 locations. Samples collected from this AOC indicate that minor releases have occurred (i.e., VOCs, SVOCs) at this AOC; however, the concentrations detected are below the applicable I/C DEC. Compliance with the DEC for this AOC will be achieved through the use of the EUR restricting residential use and using the I/C DEC as discussed in Section 4.1.1 of this RAP.

7.1.3 AOC-14: Ground Staining – Building 601/604

Staining on the concrete slab located between Buildings 601 and 604 was observed during the 1992 assessment reported in the RCRA Facility Assessment (Woodard & Curran, 1993). The material was described as a black fibrous material and covered a 100 square foot area (1/2-inch thick).

A sample (SS-012) was collected to characterize the staining. The sample was analyzed for metals and SVOCs (n-DBP and n-DPA only). The results indicated that the material did not contain concentrations of these compounds that exceed the I/C DEC. Compliance with the I/C DEC for this AOC will be achieved through the use of the EUR restricting residential use as discussed in Section 4.1.1 of this RAP.

7.1.4 AOC-37: Building 80

An active baghouse system (Former SWMU#43) was identified at Building 80. A surface sample (0 to 2 feet below grade) and a shallow sample (2 to 4 feet below grade) were collected from two locations and analyzed for VOCs and SVOCs. The shallow samples contained low concentrations of PAHs; all concentrations were below the I/C DEC criteria. Compliance with the DEC for this AOC will be achieved through the use of the EUR restricting residential use and using the I/C DEC as discussed in Section 4.1.1.

7.2 Sitewide Groundwater

Groundwater remedial actions conducted at the Site consist of the extraction system and the DNAPL extraction system. Both systems have been operating as interim measures since 2005.

7.2.1 Extraction System

The CTDEEP issued LANXESS a renewal of Discharge Permit (No. SP0000065) on May 5, 2020, for the operation of the groundwater extraction system currently operating at the Site. The Discharge Permit allows for the discharge of remediation groundwater collected from the system to be discharged to the Naugatuck-POTW facility located to the south of the Site. The effective date of this permit is June 1, 2020, with an expiration date of May 31, 2025. On February 6, 2023, the Discharge Permit was transferred to the BON who has taken over the operation, monitoring, and reporting for the groundwater extraction system.

The groundwater extraction system was installed in 2005 and initially consisted of three extraction wells (EW-1, EW-2, and EW-3) as shown on **Figure 2**. After approximately one year of operation, Extraction Well EW-1 was permanently taken off-line due to low concentrations detected in the effluent samples. Since that time, groundwater extraction has been performed at EW-2 and EW-3.

In August 2016, Woodard & Curran submitted a monitoring plan that would initiate a trial shutdown of the groundwater recovery system based on groundwater monitoring in select wells and their compliance with SWPC. As concentrations have continued to decrease across the Site, a trial shutdown is anticipated to occur in the near future to assess the current conditions. The details of the shutdown plan and associated groundwater monitoring will be reported as part of Annual Reports under the Stewardship Permit.

7.2.2 DNAPL

Historically, DNAPL was measured in Monitoring Wells MW-161, MW-171, and MW-172. In 2017, the DNAPL recovery at the Site was evaluated resulting in the recovery system being modified from dedicated pneumatic positive displacement recovery pumps to a peristaltic pump with dedicated tubing in wells as needed. The recovered DNAPL is pumped into plastic containers which are placed in a metal 55-gallon drum that is located inside the Water Treatment building. Periodically, the recovered waste stream is transported offsite for disposal and was most recently removed from the Site on March 30, 2018.

Since 2020, DNAPL has continued to be measured in MW-171 only at thicknesses less than 0.5 foot. During this reporting period, approximately 1.55 gallons of DNAPL were recovered from Monitoring Well MW-171 when sufficient thicknesses were measured. It is anticipated that this remedial action will continue until DNAPL has been removed to the extent practicable.

7.2.3 Vapor Intrusion

Groundwater data collected from the Site indicate that existing buildings are not at risk of vapor intrusion. Groundwater conditions will be assessed to determine the potential risk of vapor intrusion to proposed buildings as the additional phases of the redevelopment plans are finalized and reported as addenda to this RAP. Regardless of the groundwater conditions, the construction of all new buildings will include the installation of the sub-grade portion of sub-slab depressurization systems at the time of installation. Groundwater monitoring data from nearby wells will be evaluated to determine the risk of vapor intrusion to specific structures. If groundwater data suggest an unacceptable risk of vapor intrusion is present beneath a new building, sub-slab depressurization will be utilized to mitigate that risk.

7.3 AOC-48: Building 112 Laboratory Waste Storage Area

Laboratory wastes generated in Building 112 were consolidated and temporarily stored at the designated laboratory waste storage area (Former SWMU#35) prior to offsite disposal. Laboratory waste containers (Former SWMU#38) and a parts cleaner (Former SWMU#45) were identified in this building during the 1992 inspection. No evidence of a release was observed. Laboratory operations historically resulted in the generation of small amounts of hazardous wastes. Waste oil and solvents were stored in the waste storage area prior to being shipped offsite for disposal. The waste storage area measured approximately 6 feet by 10 feet and was located adjacent to the loading dock on the east side of Building 112. The waste storage area was closed following the collection of concrete samples in 2008 as reported in the Closure Report: Former Hazardous Waste Accumulation Area, dated April 3, 2008.

A total of 23 samples were collected from 14 locations. Low concentrations of some VOCs, SVOC, and metals were detected in some samples, indicating that a release has occurred from this AOC. All concentrations detected are below the I/C DEC, and compliance with the DEC for this AOC will be achieved through the use of the I/C DEC as discussed in Section 4.1.1.

One sample (BD112-SB07) collected from 0 to 2 feet beneath the building slab contained cobalt at a concentration that exceeds the GB PMC. An EUR will be used to render this soil environmentally isolated beneath the existing building as discussed in Section 4.3.1 of this RAP. Environmentally isolated soil is not subject to the GB PMC; therefore, compliance will be achieved through this remedial action.

7.4 AOC-76: Ecological Risk Assessment Area

As discussed in Section 3.4, this AOC was identified following discussions held with CTDEEP in 2017 regarding ecological risk assessment at the Site. Based on these discussions, groundwater in the vicinity of MW-3 was targeted for further assessment of metals (cadmium, copper, and zinc) and this metals-impacted area was designated as AOC-76. The portion of the Site referred to as AOC-76 is located between a railroad track and the Naugatuck River. Beyond the railroad track, which is immediately upgradient of AOC-76, is the main portion of the former chemical manufacturing facility. The area downgradient of AOC-76 is undeveloped adjacent to the Naugatuck River. It is believed the source of metals impact may be due to degraded fill material containing metals placed in AOC-76. The degraded fill was likely placed prior to the early 1900s.

Calcium polysulfide injection pilot testing was performed during three consecutive days during the second quarter of 2022 in accordance and Section II of the CTDEEP TA Permit Registration (Authorization No. TA-360) issued on April 13, 2022, and the *Workplan for Temporary Authorization Permit* revised on March 11, 2022 (the "Revised Workplan").

The soil mixing pilot program was conducted in accordance with Section II of the CTDEEP TA Permit Registration (Authorization No. TA-360) issued on April 13, 2022, and the Revised Workplan. Active discharge was completed over 14 days during the fourth quarter of 2022 and a 4-day period in the first quarter of 2023. A total of 21 days of active discharge have been performed under the TA Permit as of the end of the first quarter of 2023.

Groundwater monitoring has been completed quarterly as required under the TA Permit and will continue for 2023. Full-scale design of the in situ (see Section 4.9 of this RAP) is currently underway, and a request for modification of the existing TA Permit is expected to be submitted for approval.

7.5 AOC-20: Former Pre-Treatment Plant Lift Station Area

The former Pre-Treatment Plant Lift Station Area (AOC-20) is located in the southeast portion of the Site, adjacent to the Naugatuck River. Soil data collected from AOC-20 exceeds the I/C DEC and GB PMC. The anticipated remedial action for this AOC includes the use of an engineered control, rendering the soil inaccessible (see Section 4.2.1 of this RAP) and environmentally isolated (see Section 4.3.1 of this RAP).

Concentrations detected in soil indicate that NAPL is present as defined in Section 22a-133k-2(c)(4) of the RSRs. A NAPL variance may be used as discussed in Section 4.5 of this RAP. Remedial options are currently being evaluated, and pre-design analytical data will be collected if warranted.

8. EVALUATION OF SUSTAINABLE AND RESILIENT REMEDIATION

In addition to the requirements established in the Stewardship Permits to achieve compliance with the RSRs, LANXESS and the BON are both committed to ensuring that the remedial approaches identified in this RAP are both environmentally sustainable and resilient. This section compares the remedial approaches identified in Section 4 of this RAP to the Best Management Practices and evaluates the impacts of changing conditions at the Site due to climate change.

8.1 Green Remediation Best Management Practices

The USEPA defines Green Remediation as the process of examining the environmental footprint of the Site activities. The goal of sustainable remediation is to: reduce the total energy and natural resources used; reduce the production of greenhouse gas and the generation of wastes; and increase the percentage of renewable energy used. The following elements of green remediation summarized below were evaluated as part of this RAP:

Total energy and renewable energy used

- Administrative controls: Where appropriate, variances and exemptions allowable under the RSRs will be used to achieve compliance with the RSRs. This will reduce the amount of soil that is required to be excavated from the Site.

Air pollution and greenhouse gas emissions

- Anti-idling: Where appropriate, language encouraging anti-idling will be incorporated into contractor's documents and signage will be posted to promote voluntary compliance.
- Waste transportation by rail: Utilizing rail transportation for transport of both hazardous and non-hazardous waste generated on the Property to reduce the use of trucks and as a result, lower the overall greenhouse gas emissions and fossil fuel demand.
- Local backfill sources: Utilize local backfill sources for 3-inch processed stone, topsoil, organics, and blended organically enriched topsoil. Sources located near the Site will be prioritized which will result in less trucking and reduce greenhouse gas emissions and fossil fuel demand.
- Dedicated dust suppression measures: Use of a dedicated sprinkler network and/or water tower to provide dust suppression, eliminating the energy demand to conduct dust suppression with alternate more energy-intensive methods (i.e., water truck).
- Remote air monitoring: Use of solar-powered real-time monitoring equipment with remote telemetry capability eliminates the need for additional staff onsite, reducing the number of trips to the Site and safety concerns (e.g., slips/trips).
- Remote site access: Use of remote video meetings and solar cameras to track progress of remediation activities and reduce overall travel needed to the Site.

Water use and impacts to water resources

- Implementation during the seasonal low water table timeframe as well as a phased approach, to reduce the amount of water being generated requiring treatment and minimizing energy demands required for continuous groundwater dewatering.

Materials management and waste reduction

- Reuse of excavated soil: During the Site remediation, soil excavated that is eligible under Section 22a-133k-2(h) of the RSRs for reuse will be identified and reused onsite where appropriate. In the event that material must be removed from the Site to accommodate the redevelopment plan, beneficial reuse offsite will be prioritized over disposal at a permitted facility when regulatory requirements are met.
- Biodegradable erosion control and restoration products: Install biodegradable erosion and sedimentation control products and restoration stabilization products including straw wattles and straw bales, biodegradable erosion control blankets, and biodegradable staples.

Land management and ecosystem protection

- Erosion and sedimentation controls: Install silt fencing around the excavation areas, inlet protection barriers within catch basins across the work area, and erosion controls around the stockpile to prevent run-off and erosion from the excavation areas to adjacent unimpacted areas.

8.2 Environmental Resilience

The incorporation of climate resilience measures is critical to ensuring that the remedial actions implemented at the Site in the near future will remain long-term effective tools to protect human health and the environment. The following changing environmental factors and implications were considered during the development of this RAP:

Potential for increased precipitation events

The potential exists for more frequent and longer duration precipitation events in the future. This could result in increased runoff at the Site, which could affect engineered controls in areas prone to erosion. Infiltration galleries will be used where appropriate to reduce runoff. The use of infiltration galleries to manage stormwater runoff has been incorporated into the Phase I redevelopment plan and is expected to be utilized during future phases of redevelopment.

Where appropriate, compliance with the RSRs may be achieved through the use of engineered controls. Many of the engineered controls will consist of proposed buildings or onsite parking areas constructed of bituminous pavement. These types of controls are designed with erosion controls in place to minimize infrastructure damage. Some engineered controls may be constructed outside of areas where these features are planned. For these engineered controls, designs that prioritize erosion controls will be selected. Examples of enhanced erosion controls that may be used include vegetated drainage swales and landscaping rocks in areas of low topographic relief. Modified riprap may be incorporated into the designs of engineered controls to stabilize slopes that may be prone to erosion.

An increase in storm water runoff across the region could affect the water level of the Naugatuck River. Most of the Site is at elevations that are not likely to be susceptible to flooding; however, it is conceivable that portions of the Site located near the River could be affected. An increased water level in the river could affect engineered controls immediately adjacent to the river. Therefore, the potential for flooding along the riverbanks will be considered during the design of engineered controls constructed along the riverbank, and erosion controls will be utilized where appropriate.

Increased frequency of severe weather events

The frequency of severe weather events may increase in the future. Severe weather may result in increased winds speed, which has the potential to generate air-borne dust. This could affect areas where vegetation is not established. The use of landscaping rocks in the redevelopment design would reduce the likelihood that strong winds could generate air-borne dust at the Site.

Prolonged drought

While an increase in the intensity and duration of precipitation is expected, periods of prolonged drought are also likely to occur. This has an immediate impact on site vegetation that may be used as groundcover in certain areas of the Site. The selection of native vegetation and drought resilient species as cover material will be evaluated for areas of the Site where vegetation will be used.

Effects of sea-level rise and increase runoff

Given the elevation and distance of the Site to the shore, sea-level rise is not expected to directly impact the Site. *The Sea Level Rise Effects on Roads and Large Marshes* is a screening level tool that is maintained by CTDEEP. The model is designed to assess the future conditions along the Connecticut coastline through 2085. The model domain does not include the Site or the surrounding area, and those areas directly affected by sea-level rise are in close proximity to the shore.

9. ADMINISTRATIVE AND MONITORING ACTIVITIES

This section describes administrative and long-term monitoring tasks that will be required to meet the requirements set forth in the RSRs. A groundwater monitoring program will be implemented to ensure groundwater quality remains in compliance with the RSR requirements.

9.1 Public Notice Requirements

LANXESS and BON will provide notice to the public for review and comment of draft RAPs in accordance with Section 22a-134a(i) of the CGS and any associated Stewardship Permit requirements. Documentation of the notice will be provided to the CTDEEP. Within 45 days of the end of the comment period, LANXESS will provide the CTDEEP with a summary and response to comments that the CTDEEP will then adopt, adopt with modification, or reject and respond directly.

9.2 Environmental Use Restrictions

The RSRs require EURs be in effect for exemptions and variances from the criteria proposed as remedial actions under this RAP (see Section 4 of this RAP). Under Section 22a-133k-1(e), the RSRs allow for the use of an EUR and notice of activity and use limitation. Land use restrictions utilized at the Site will take the form of the EUR, which requires the Commissioner's approval. Public notice of all EURs will be provided as required under the RSRs.

9.3 Post-Remediation Groundwater Monitoring

Following completion of excavation activities, a plan for post-remediation groundwater monitoring will be developed, including the possible installation of new groundwater monitoring wells and a sampling schedule and frequency. The monitoring program will be used to assess the post-remediation quality of groundwater following completion of the proposed remedial actions.

Results of the groundwater analytical results will be compared to appropriate Volatilization Criteria and SWPC to ensure compliance with the RSRs. Post-remediation monitoring will be continued for a minimum of one year in accordance with the RSRs.

9.4 Completion Report

Once all remedial activities have been completed, a Remedial Action Completion Report (RACR) will be prepared detailing all remedial activities. The report will include a summary of activities, a photographic log of onsite remedial activities, a summary of field and analytical data, an evaluation of compliance with applicable RSR criteria, and post-remediation groundwater monitoring requirements.

10. SCHEDULE

Implementation of this RAP and the remedial activities presented herein is anticipated to begin following completion of the public notice period and approval from CTDEEP. As discussed throughout this document, the BON is implementing a phased approach to the redevelopment of the Site. A similar phased approach may be used to implement the remediation work in select AOCs as the redevelopment plans are finalized. Currently, multiple phases of remediation are anticipated at the Site and the details of the later phases of redevelopment have not yet been finalized so this schedule should be considered preliminary. The Phase I sitewide redevelopment plan is provided on **Figure 3**.

The Phase I sitewide redevelopment will include the construction of the key roadways and drainage infrastructure and is also likely to require the remediation of the AOC-48: Building 112 Laboratory Waste Storage Area. Phase I remediation activities will also include the filing of an EUR restricting residential activities at the Site allowing for the use of the I/C DEC on a sitewide basis as well as an EUR for Building 112 to render underlying soil inaccessible and/or environmentally isolated. The Phase I remediation plan is expected to begin in September 2023 and be completed during 2024.

Additional phases of redevelopment will include the expansion of the onsite roadways and the subdivision and development of parcels. The remediation of AOCs will generally coincide with the redevelopment plan. Portions of this Site remediation may be completed ahead of the finalization of the redevelopment plan, if sufficient details regarding the redevelopment have been determined. It is anticipated that all remediation activities will be implemented within the 10-year expiration period of the Stewardship Permits.

Interim remedial actions conducted at the Site consist of the groundwater extraction system and the DNAPL recovery system. Both systems have been operating as interim measures since 2005. Additional interim remedial measures, consisting of pilot scale testing, have been completed at AOC-76. Full-scale remedial activities for this AOC are currently being designed. It is expected that full-scale remedial activities will commence in 2024 and continue through 2026. Redevelopment plans for the area between the railroad tracks and the Naugatuck River are not identified in the most recent revision. Remedial alternatives at these AOCs will be selected following the completion of the pre-design investigation and will be submitted as addenda to this RAP.

It is anticipated that the remedial actions completed under this RAP or in subsequent RAP addenda will be reported in the Stewardship Permit Annual Report for the year the activities are completed. The RACR will be submitted within 90 days of completion of all remedial activities.

11. REFERENCES

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Woodard & Curran. 2022. Work Plan for Temporary Authorization Permit for AOC-76 Pilot Test. November 2021 and revised March 11, 2022.

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Woodard & Curran. 2023b. Materials Management Plan. June 30, 2023.

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TABLES

Table 1: AOC and Soil Summary Table

Table 1

AOC and Soil Summary Table
Former Uniroyal Chemical Faculty
Naugatuck, CT

Area of Concern and Description		Constituents of Concern	Release [Y/N]	Exceeds I/C DEC [Y/N]	Exceeds GB PMC [Y/N]	Anticipated Remedial Actions
AOC 1	Hazardous Waste Container Storage Area #1 Storage area used to store 55-gallon drums of Site-related waste from 1980 to 1999. Consisted of 50 ft. x 200 ft. asphalt pad with concrete berm. Three catch basins used to direct runoff to Pre-Treatment Plant (PTP). **Former Designation: SWMU #1 (W&C, 1993) and Hazardous Waste Container Storage Area #1 (CRA, 2000).**	VOCs, SVOCs, and Metals (APP IX List -Table 7.1 CRA 2000a)	No	N/A	N/A	•Clean closure of the RCRA Unit achieved. •Soil impacts detected attributed to AOC-13.
AOC 2	Hazardous Waste Storage Area #2 Storage are used to store 55-gallon drums of Site-related waste from 1980 to 1999. Consisted of an 18 ft. x 54 ft. area in the NW corner of Building 676. No constructed secondary containment. The storage area was marked by yellow painted boundaries on concrete floor. **Former Designation: SWMU #2 (W&C, 1993) and Hazardous Waste Storage Area #2 (CRA, 2000).**	VOCs, SVOCs, and Metals (APP IX List -Table 7.1 CRA 2000)	No	N/A	N/A	•Clean closure of the RCRA Unit achieved.
AOC 3	Building 54 Laboratory Sample Storage Unit Storage area used to store and consolidate liquid wastes from laboratory processes. Consisted of 28 ft. x 70 ft. area on cement floor. No constructed secondary containment, no floor drains. **Former Designation: SWMU #3 (W&C, 1993) and Laboratory Sample Storage Unit (CRA, 2004)**.	VOCs, SVOCs, metals, pesticides, PCBs	No	N/A	N/A	•Clean closure of the RCRA Unit achieved.
AOC 4	Temporary Drum Storage Unit Storage area used for temporary storage of 55-gallon drums of site-related waste on a flatbed trailer prior to transportation to AOC #1 or AOC #2. Area consists of 50 ft. x 50 ft. asphalt pad with curbing north of Building 118. One catch basin was used to direct spills and/or runoff to the PTP. **Former Designation: SWMU #4 (W&C, 1993) and Temporary Drum Storage Area (CRA, 2000)**.	VOCs, SVOCs, Metals	No	N/A	N/A	•Clean closure of the RCRA Unit achieved. •Deeper impacts in this area (aniline and n-DPA) are associated with a release from upgradient sources and will be addressed in a future RAP addenda.
AOC 5	Tank System (Tank 33C)/Tank Farm 109 12,000 gallon AST for the storage of waste nonenes. Secondary containment consisted of 10 ft. concrete wall and catch basin to direct spills/runoff to PTP. Additional ASTs for the storage of bulk chemicals including DPA, hydrazine, Naugard P, Paracresol, phosphorous trichloride, phenol, polygard, propagyl alcohol, sodium hypochlorite, and sulfuric acid. **Former Designation: SWMU #5 (W&C, 1993) and Waste Nonenes Tank System (CRA, 2000).**	VOCs, SVOCs, Metals	Yes	No	No	•Clean closure of the RCRA Unit Achieved - release of nonene to soil excavated as part of the closure •A sitewide ELUR will be implemented to limit land use to industrial/commercial. •SVOCs detected at depth associated with release from upgradient source and will be adddressed in a future RAP addenda.
AOC 6	Nonenes Underground Storage Tank 13,000 gallon UST for the storage of waste nonenes prior to blending with No. 6 Fuel Oil for subsequent burning. **Former Designation: SWMU #6 (W&C, 1993) and Nonenes UST (CRA, 2000)**.	SVOCs, VOCs, Metals	No	No	No	•Clean closure of the RCRA Unit Achieved •SVOCs and metals at depth associated with upgradient release. A sitewide ELUR will be implemented to limit land use to industrial/commercial. •Remediation details will be provided in a future addenda to the RAP.
AOC 7	AOC #7 Nonenes Above Ground Storage Tanks Unit consisted of one nonenes decanter AST and two nonenes blend tanks. All three ASTs within 2 ft. high concrete berm. Catch basin and piping directed spills and/or runoff to PTP. **Former Designation: SWMU #7 (W&C 1993), Nonenes ASTs Unit (CRA 2000)**.	SVOCs, VOCs, Metals	Yes	Yes	No	•Clean closure of the RCRA Unit Achieved •SVOCs and metals at depth associated with upgradient release and will be addressed in a future addenda to the RAP.
AOC 8	Waste Nonenes Storage Pad The pad consisted of a 25 ft. x 40 ft. asphalt pad with a 6-inch asphalt berm on 3 sides. A catch basin was present to transport spills and/or runoff to the PTP. **Former Designation: SWMU #16 (W&C, 1993) and Nonenes Tanker Unloading Area (CRA, 2004).**	SVOCs, VOCs, Metals	No	No	No	•Clean closure of the RCRA Unit Achieved •SVOCs and metals at depth associated with upgradient release and will be addressed in a future addenda to the RAP.
AOC 9	Tank System (Tank No. 135C)/Tank Farm 124 12,000 gallon AST for the storage of distillate tar residues and other waste products from plant operations. Secondary containment consisted of 13 ft. high concrete wall with concrete base. Catch basin and piping to direct spills and/or runoff to PTP. **Former Designation: SWMU #8 (W&C, 1993) and Tank 135C (CRA, 2004)**	VOCs, SVOCs, and Metals (Limited APP IX List -Table 7.1 CRA 2006)	Yes	Yes	No *(no SPLP samples were analyzed for PCBs; any exceedances are tentative and based on the "20x Rule")*	•A sitewide ELUR will be implemented to limit land use to industrial/commercial. •During redevelopment, remediation will be performed by rendering soil inaccessible and/or environmentally isolated in accordance with the RSRs. Soil may also be excavated and consolidated beneath an engineered control currently planned in the vicinity of AOC-75. •Remediation details will be provided in a future addenda to the RAP.

Table 1

AOC and Soil Summary Table
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Naugatuck, CT

Area of Concern and Description		Constituents of Concern	Release [Y/N]	Exceeds I/C DEC [Y/N]	Exceeds GB PMC [Y/N]	Anticipated Remedial Actions
AOC 10	Drum Lot This area was historically used to store unclean "RCRA Empty" drums for reuse. Up to 30,000 drums stored at times. **Former Designation: SWMU #9 (W&C, 1993)**	VOCs, SVOCs, Metals, PCBs	Yes	No	Yes	•A sitewide ELUR will be implemented to limit land use to industrial/commercial. •During redevelopment, remediation will be performed by rendering soil inaccessible and/or environmentally isolated in accordance with the RSRs. Soil may also be excavated and consolidated beneath an engineered control currently planned in the vicinity of AOC-75. •Remediation details will be provided in a future addenda to the RAP.
AOC 11	Tire Lot 19-acre fenced earthen lot that was used from 1915 to the mid-1950s for the storage of tires and tire beads, as well as for the disposal of a wide variety of solid wastes, including boiler ash, construction debris, scrap rubber, iron sludge, and chemical waste. **Former Designation: SWMU #10 (W&C, 1993)**	VOCs, SVOCs, Metals	Yes	Yes	Yes	•A sitewide ELUR will be implemented to limit land use to industrial/commercial. •During redevelopment, remediation will be performed by rendering soil inaccessible and/or environmentally isolated in accordance with the RSRs. Soil may also be excavated and consolidated beneath an engineered control currently planned in the vicinity of AOC-75. •A site-specific dilution factor may be calculated for the SWPC. •Remediation details will be provided in a future addenda to the RAP.
AOC 12	Pretreatment Plant Drain Line PTP constructed in 1974 to process facility-wide waste water and storm water runoff prior to discharge. In 2002, the main drain pipe from the PTP was inspected and observed to be damaged. The pipe was repaired. Suspected Groundwater contamination from this AOC. **Former Designation: SWMU #11 (W&C, 1993)**	VOCs, SVOCs	Yes (to groundwater)	N/A	N/A	•This AOC is subject to ongoing groundwater remediation. •Groundwater extraction and monitoring will continue until compliance with the RSRs can be demonstrated.
AOC 13	South Yard Fill Materials Disposal of fly ash and iron oxide sludge over several acres in the South Yard from the production of aniline. **Former Designation: SWMU #11 (W&C, 1993)**	SVOCs, ETPH, Metals	Yes	Yes	Yes	•A sitewide ELUR will be implemented to limit land use to industrial/commercial. •During redevelopment, remediation will be performed by rendering soil inaccessible and/or environmentally isolated in accordance with the RSRs. Soil may also be excavated and consolidated beneath an engineered control currently planned in the vicinity of AOC-75. •Remediation details will be provided in a future addenda to the RAP. •Groundwater extraction and monitoring will continue until compliance with the RSRs can be demonstrated.
AOC 14	Ground Staining – Buildings 601/604 Black fibrous material observed on the ground between Bldgs. 601 and 604. **Former Designation: SWMU #12 (W&C, 1993)**	SVOCs, Metals	Yes	No	No *(no SPLP samples were analyzed for Metals; any exceedances are tentative and based on the "20x Rule")*	•No further investigation warranted at this time. A sitewide ELUR will be implemented to limit land use to industrial/commercial.
AOC 15	Building 676 Concrete Vats Several concrete floor vats of black sticky material on the first floor of Bldg. 676. **Former Designation: SWMU #13 (W&C, 1993)**	VOCs, SVOCs, Metals	Yes	Yes	Yes	•A sitewide ELUR will be implemented to limit land use to industrial/commercial. •During redevelopment, remediation will be performed by rendering soil inaccessible and/or environmentally isolated in accordance with the RSRs. •Soil may also be excavated and consolidated beneath an engineered control currently planned in the vicinity of AOC-75. This engineered control will incorporate this area. •Remediation of this area will be performed as part of sitewide redevelopment. Prior to or during redevelopment activities, additional sampling may be performed to further document soil conditions. •Remediation details will be provided in a future addenda to the RAP.
AOC 16	Former Coal Storage Area Coal was stored on the ground west of Building 668. **Former Designation: SWMU #17 (W&C, 1993)**	VOCs, SVOCs, Metals, PCBs, Pesticides (W&C 1995)	Yes	No	No *(no SPLP samples were analyzed for Metals; any exceedances are tentative and based on the "20x Rule")*	•A sitewide ELUR will be implemented to limit land use to industrial/commercial. No additional remediation required.
AOC 17	Railroad Tie Storage Area Area used for storage of railroad ties. Approximately 100 railroad ties observed on the ground in 1993. **Former Designation: SWMU #18 (W&C, 1993)**	SVOCs, Metals	No	No	No	•A sitewide ELUR will be implemented to limit land use to industrial/commercial. No additional remediation required.
AOC 18	Pretreatment Plant Equalization Tanks Two 250,000 gallon tanks in the south yard used to provide steady flow of influent to the PTP. Tank bottoms consist of concrete with epoxy coating. **Former Designation: SWMU #19 (W&C, 1993)**	VOCs, SVOCs, Metals	Yes	Yes	Yes	•A sitewide ELUR will be implemented to limit land use to industrial/commercial. •During redevelopment, remediation will be performed by rendering soil inaccessible and/or environmentally isolated in accordance with the RSRs. Soil may also be excavated and consolidated beneath an engineered control currently planned in the vicinity of AOC-75. •Remediation of this area will be performed as part of sitewide redevelopment. Prior to or during redevelopment activities, additional sampling may be performed to further document soil conditions. •Remediation details will be provided in a future RAP submittal
AOC 19	Pretreatment Plant Clarifiers Two 650,000 gallon ASTs in the south yard used to aid in sludge removal from the PTP waste stream. Tank bottoms consist of concrete with epoxy coating. **Former Designation: SWMU #20 (W&C, 1993)**	VOCs, SVOCs, Metals	Yes	No	No	•A sitewide ELUR will be implemented to limit land use to industrial/commercial. No additional remediation required.

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AOC 20	Pretreatment Plant Lift Station Two 15,000 gallon ASTs used to raise the pH of the PTP influent prior to treatment. **Former Designation: SWMU #21 (W&C, 1993)**	VOCs, SVOCs, Metals	Yes	Yes	Yes	•A sitewide ELUR will be implemented to limit land use to industrial/commercial. •During redevelopment, a soil management plan will be redeveloped, and remediation will be performed by removing soil and consolidating it beneath the engineered control currently anticipated in the vicinity of AOC-75. •Remediation details will be provided in a future RAP •Groundwater extraction and monitoring will continue until compliance with the RSRs can be demonstrated for n-DPA.
AOC 21	Pretreatment Plant Sludge Pit 10,000 gallon sump for the removal of sludge from the PTP flow stream. **Former Designation: SWMU #22 (W&C, 1993)**	VOCs, SVOCs, Metals	Yes	No	Yes	•A sitewide ELUR will be implemented to limit land use to industrial/commercial. •During redevelopment, remediation will be performed by rendering soil inaccessible and/or environmentally isolated in accordance with the RSRs. Soil may also be excavated and consolidated beneath an engineered control currently planned in the vicinity of AOC-75. •Remediation of this area will be performed as part of sitewide redevelopment. Prior to or during redevelopment activities, additional sampling may be performed to further document soil conditions. •Remediation details will be provided in a future RAP submittal
AOC 22	Material Storage Area Storage area for materials stored in drums that needed further processing. Material stored on gravel surface. **Former Designation: SWMU #29 (W&C, 1993)**	VOCs, SVOCs, Metals	Yes	Yes	Yes	•A sitewide ELUR will be implemented to limit land use to industrial/commercial. •During redevelopment, remediation will be performed by rendering soil inaccessible and/or environmentally isolated in accordance with the RSRs. Soil may also be excavated and consolidated beneath an engineered control currently planned in the vicinity of AOC-75. •During redevelopment, if aniline contaminated soil intervals are not removed as a part of Site grading, additional SPLP analysis, targeted excavation and disposal, or an environmentally isolating cap may be used to demonstrate compliance with the RSRs. •Remediation details will be provided in a future addenda to the RAP.
AOC 23	Fire Training Area Two large concrete pits in the Tire Lot (AOC #11). An additional former fire training area was identified by plant personnel in 2022 in the former Drum Lot north and east of monitoring well MW-105 **Former Designation: SWMU #34 (W&C, 1993)**	VOCs, SVOCS, PFAS	Yes	Yes	Yes	•A sitewide ELUR will be implemented to limit land use to industrial/commercial. •During redevelopment, remediation will be performed by rendering soil inaccessible and/or environmentally isolated in accordance with the RSRs. Soil may also be excavated and consolidated beneath an engineered control currently planned in the vicinity of AOC-75. •Remediation details will be provided in a future addenda to the RAP.
AOC 24	Building 84 Condensate Sump Concrete sump in basement of Building 84. **Former Designation: SWMU #23 (W&C, 1993)**	N/A	N/A	N/A	N/A	•No investigation required on condensate.
AOC 25	Building 81 Wastewater Sump Concrete sump in basement of Building 81. **Former Designation: SWMU #24 (W&C, 1993)**	N/A	N/A	N/A	N/A	•No investigation required on condensate.
AOC 26	Building 55 Condensate Sump Concrete sump in basement of Building 55 for the removal of condensation from equipment and sink discharge waters. **Former Designation: SWMU #25 (W&C, 1993)**	N/A	N/A	N/A	N/A	•No investigation required on condensate.
AOC 27	Naugatuck River Sediment Sediments adjacent to historic storm and waste water discharge points. **Former Designation: Naugatuck River Sediments (W&C, 1993)**	Metals, SVOCs	Yes	N/A	N/A	•No additional investigation warranted at this time based on the findings of the ERA conducted.
AOC 28	Building 47 Building 47 was part of the non-manufacturing operations on-site. Floor trenching was identified during 1993 RFA. **Former Designation: SWMU #41 (W&C, 1993)**	N/A	N/A	N/A	N/A	•Because this building was not part of manufacturing operations, no investigation or remediation activities warranted
AOC 29	Building 52 Building 52 was part of the non-manufacturing operations on-site. One parts cleaning unit was identified during 1993 RFA. **Former Designation: SWMU #45 (W&C, 1993)**	VOCs, SVOCs, ETPH (Table 1 - W&C 2007)	Yes	No	No	•A sitewide ELUR will be implemented to limit land use to industrial/commercial. No additional remediation required.
AOC 30	Building 54 Building 54 was part of latex production from early 1940's to 1975. Three baghouse filter systems identified during 1993 RFA. Baghouse filters used to filter airborne material and funnel captured material into lever packs. Packs then sent to hazardous waste storage area for off-site disposal.	Metals, SVOCs, VOCs	Yes	No	Yes	•A sitewide ELUR will be implemented to limit land use to industrial/commercial. •During redevelopment, remediation will be performed by rendering soil inaccessible and/or environmentally isolated in accordance with the RSRs. Soil may also be excavated and consolidated beneath an engineered control currently planned in the vicinity of AOC-75. •Remediation details will be provided in a future RAP submittal

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Area of Concern and Description		Constituents of Concern	Release [Y/N]	Exceeds I/C DEC [Y/N]	Exceeds GB PMC [Y/N]	Anticipated Remedial Actions
AOC 31	Building 55 Drum Cleaning Area Operations conducted on first floor of Building 55. Drums cleaned using Oakite, NaOH, and water. **Former Designation: SWMU #26 (W&C, 1993)**	VOCs, SVOCs, Metals (CRA 2002)	Yes	No	Yes	•A sitewide ELUR will be implemented to limit land use to industrial/commercial. •During redevelopment, remediation will be performed by rendering soil inaccessible and/or environmentally isolated in accordance with the RSRs. Soil may also be excavated and consolidated beneath an engineered control currently planned in the vicinity of AOC-75. •Remediation details will be provided in a future addenda to the RAP.
AOC 32	Building 58 Building 58 contained a chemical pilot plant that operated from the early 1950's to the early 1980's. Building 58 was demolished in 2000/2001. Floor trenching observed during 1993 site inspection. **Former Designation: SWMU #41 (W&C, 1993)**	N/A	N/A	N/A	N/A	•A sitewide ELUR will be implemented to limit land use to industrial/commercial. •During redevelopment, remediation will be performed by rendering soil inaccessible and/or environmentally isolated in accordance with the RSRs. Soil may also be excavated and consolidated beneath an engineered control currently planned in the vicinity of AOC-75. •Remediation details will be provided in a future RAP submittal
AOC 33	Building 72 Building 72 contained a chemical pilot plant that operated from the early 1950s to the early 1980s. Building 72 has been removed. Floor trenching, inactive baghouse filter and inactive scrubber systems observed during 1993 site inspection. **Former Designation: SWMU #41, SWMU #43, and SWMU #44 (W&C, 1993)**	N/A	N/A	N/A	N/A	•A sitewide ELUR will be implemented to limit land use to industrial/commercial. •During redevelopment, remediation will be performed by rendering soil inaccessible and/or environmentally isolated in accordance with the RSRs. Soil may also be excavated and consolidated beneath an engineered control currently planned in the vicinity of AOC-75. •Remediation details will be provided in a future RAP submittal
AOC 34	Building 73 Building 73 was part of the manufacturing operations on site. Specifically, products underwent additional processing after initial production. Baghouse filters used to filter airborne material and funnel captured material into lever packs. Packs then sent to hazardous waste storage area (AOC #1 or #2) for off-site disposal. Four baghouse filters identified during 1993 RFA. **Former Designation: SWMU #43 (W&C, 1993)**	VOCs, SVOCs, ETPH (Table 1 - W&C 2007)	Yes	No	Yes	•A sitewide ELUR will be implemented to limit land use to industrial/commercial. •Remediation of this area will be performed as part of sitewide redevelopment. Prior to or during redevelopment activities, additional sampling may be performed to document soil conditions. •Remediation details will be provided in a future RAP submittal
AOC 35	Buildings 75, 334, & 335 Buildings 75, 334, and 335 were historically leased to Modern Metal Finishing Co. to conduct metal anodizing and other coating processes. **Former Designation: SWMU #28 (W&C, 1993)**	SVOCs, VOCs, Metals, PFAS	No	N/A	N/A	No remeidaiton required
AOC 36	Building 79 Building 79 was used for chemical processing of antioxidants. Floor trenching, baghouse filter, and 2 scrubber systems observed during 1993 site inspection. Adjacent to Building 79 tank farm (AOC #62) **Former Designation: SWMU #41, SWMU #42, SWMU #43, SWMU #44 (W&C, 1993)**	VOCs, SVOCs, ETPH (Table 1 - W&C 2007, W&C 2014)	Yes	Yes	Yes	•Soil remediation already implemented. A sitewide ELUR will be implemented to limit land use to industrial/commercial. •During redevelopment, should the shallow soils containing SVOCs above the I/C DEC not be removed as a part of Site grading, they can be addressed by targeted excavation and disposal, or rendered inaccessible, as necessary. •DNAPL extraction continues to be performed in the vicinity of this area. •Remediation details will be provided in a future addenda to the RAP.
AOC 37	Building 80 Building 80 was part of the non-manufacturing operations on site. One baghouse filter and one inactive scrubber system identified during 1993 RFA. **Former Designation: SWMU #43 (W&C, 1993)**	VOCs, SVOCs, ETPH, Metals (Zinc), Pesticides, Reactively (CN, S) (Table 1 - W&C 2007)	Yes	No	No	•A sitewide ELUR will be implemented to limit land use to industrial/commercial. No additional remediation required.
AOC 38	Building 81 Building 81 was used as part of the non-manufacturing operations on-site (for records storage and office space). Fume hoods and transport carts identified during 1993 RFA. **Former Designation: SWMU #38 (W&C, 1993)**	N/A	N/A	N/A	N/A	•A sitewide ELUR will be implemented to limit land use to industrial/commercial •Because this building was not part of manufacturing operations, no investigation or remediation activities warranted
AOC 39	Building 86 Building 86 was used for on-site manufacturing. Floor trenching observed within the building. **Former Designation: None**	SVOCs, Metals	Yes	Yes	Yes	•A sitewide ELUR will be implemented to limit land use to industrial/commercial. •During redevelopment, remediation will be performed by rendering soil inaccessible and/or environmentally isolated in accordance with the RSRs. •Soil may also be excavated and consolidated beneath an engineered control currently planned in the vicinity of AOC-75. •Remediation details will be provided in a future addenda to the RAP.
AOC 40	Building 88 Building 88 was used for chemical processing of multiple compounds including accelerators, activators, and antioxidants. Two baghouse filter systems and four scrubber systems identified during 1993 RFA. **Former Designation: SWMU #43 and SWMU #44 (W&C, 1993)**	ETPH, VOCs, SVOCs, Reactivity (S) (Table 1 - W&C 2007)	Yes	No	Yes	•A sitewide ELUR will be implemented to limit land use to industrial/commercial. •During redevelopment, remediation will be performed by rendering soil inaccessible and/or environmentally isolated in accordance with the RSRs. •Soil may also be excavated and consolidated beneath an engineered control currently planned in the vicinity of AOC-75. •Remediation details will be provided in a future addenda to the RAP.

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AOC 41	Building 89 Building 89 was used for on-site manufacturing. Floor trenching observed within the building. **Former Designation: None**	ETPH, VOCS, SVOCs (Table 1 - W&C 2007)	Yes	No	Yes	•A sitewide ELUR will be implemented to limit land use to industrial/commercial. •During redevelopment, remediation will be performed by rendering soil inaccessible and/or environmentally isolated in accordance with the RSRs. •Soil may also be excavated and consolidated beneath an engineered control currently planned in the vicinity of AOC-75. •Remediation details will be provided in a future addenda to the RAP.
AOC 42	Building 94 Building used for the chemical processing of accelerators. Scrubber system identified during 1993 RFA. Floor trenching observed within the building. **Former Designation: SWMU #44 (W&C, 1993)**	ETPH, VOCS, SVOCs (Table 1 - W&C 2007)	Yes	Yes	Yes	•A sitewide ELUR will be implemented to limit land use to industrial/commercial. •During redevelopment, remediation will be performed by rendering soil inaccessible and/or environmentally isolated in accordance with the RSRs. •Soil may also be excavated and consolidated beneath an engineered control currently planned in the vicinity of AOC-75. •Remediation details will be provided in a future addenda to the RAP.
AOC 43	Building 100 and Tank Farm Building used for chemical processing of various chemicals including Naugalube 438L, non-strainers, and Omite. Cylindrical filter units and 3 scrubber systems identified during 1993 RFA. **Former Designation: SWMU #27, SWMU #41, SWMU #42, and SWMU #44 (W&C, 1993)**	ETPH, VOCs, SVOCs, Pesticides, Reactivity (Table 1 - W&C)	Yes	No	Yes	•A sitewide ELUR will be implemented to limit land use to industrial/commercial. •During redevelopment, remediation will be performed by rendering soil inaccessible and/or environmentally isolated in accordance with the RSRs. Soil may also be excavated and consolidated beneath an engineered control currently planned in the vicinity of AOC-75. •Remediation details will be provided in a future addenda to the RAP.
AOC 44	Building 101E Building used for on-site drying, grinding, milling and packaging processes involving the handling of various chemicals including Naugard and BLE-75. Equipment washout area present within the building. Baghouse filter identified during 1993 RFA. **Former Designation: SWMU #32,SWMU #42, and SWMU #43 (W&C, 1993)**	VOC, SVOCs, Metal, ETPH	Yes	Yes	Yes	•A sitewide ELUR will be implemented to limit land use to industrial/commercial. •During redevelopment, remediation will be performed by rendering soil inaccessible and/or environmentally isolated in accordance with the RSRs. •Soil may also be excavated and consolidated beneath an engineered control currently planned in the vicinity of AOC-75. •Remediation details will be provided in a future addenda to the RAP.
AOC 45	Building 101W Building 101W was part of the manufacturing operations on site. Specifically, products underwent additional processing after initial production. Waste drums and one baghouse filter identified during 1993 RFA. **Former Designation: SWMU #42 and SWMU #43 (W&C, 1993)**	VOCs, SVOCs, Metals	Yes	Yes	Yes	•A sitewide ELUR will be implemented to limit land use to industrial/commercial. •During redevelopment, remediation will be performed by rendering soil inaccessible and/or environmentally isolated in accordance with the RSRs. Soil may also be excavated and consolidated beneath an engineered control currently planned in the vicinity of AOC-75. •Remediation details will be provided in a future addenda to the RAP. •This area is likely to be considered together with AOC-67
AOC 46	Building 109 Building 109 was used for the chemical processing of antioxidants including AO449N, Cyclohexene, Cyclohexene Oxide, Dinonenes, Naugard 492, Naugard 512, Naugard P, Polygard, and UMNO. Waste drums and/or barrels and 2 scrubber systems identified during 1993 RFA. **Former Designation: SWMU #42 and SWMU #44 (W&C, 1993)**	VOCs, SVOCs, Metals	Yes	Yes	Yes	•A sitewide ELUR will be implemented to limit land use to industrial/commercial. •During redevelopment, remediation will be performed by rendering soil inaccessible and/or environmentally isolated in accordance with the RSRs. •Soil may also be excavated and consolidated beneath an engineered control currently planned in the vicinity of AOC-75. •Remediation details will be provided in a future addenda to the RAP.
AOC 47	Building 111 Building 111 was used as part of the non-manufacturing operations on-site. Fume hoods and transport carts identified during 1993 RFA. **Former Designation: SWMU #38 (W&C, 1993)**	SVOCs, VOCs, Metals	Yes	No	Yes	•A sitewide ELUR will be implemented to limit land use to industrial/commercial. •During redevelopment, remediation will be performed by rendering soil inaccessible and/or environmentally isolated in accordance with the RSRs. •Soil may also be excavated and consolidated beneath an engineered control currently planned in the vicinity of AOC-75. •Remediation details will be provided in a future addenda to the RAP.
AOC 48	Building 112 Lab Waste Storage Area Building 112 has been used as part of the non-manufacturing operations on site and is still currently active. Laboratory waste storage area located in Building 112 served as a RCRA regulated <90-day storage facility. Also includes fume hoods and chemical transport carts identified during 1993 RFA. One parts cleaner identified during 1993 RFA. **Former Designation: SWMU #35, SWMU #38, and SWMU #45 (W&C, 1993)**	VOCs, SVOCs, Metals, Reactivity (CN, S) (W&C 2008)	Yes	No	Yes	•A sitewide ELUR will be implemented to limit land use to industrial/commercial. •This area is located on the portion of the Site that is outside of the redevelopment project, with only minor cut and fill around the periphery of the property. Area will be rendered environmentally Isolated.
AOC 49	Building 121 The floor of Building 121 historically exposed to brine and brine treatment chemicals. **Former Designation: SWMU #30 (W&C, 1993)**	VOCs, SVOCs, Metals	Yes	Yes	No	•A sitewide ELUR will be implemented to limit land use to industrial/commercial. •During redevelopment, remediation will be performed by rendering soil inaccessible and/or environmentally isolated in accordance with the RSRs. •Soil may also be excavated and consolidated beneath an engineered control currently planned in the vicinity of AOC-75. •Remediation details will be provided in a future addenda to the RAP.

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AOC 50	Building 124 Building 124 was used for chemical processing including 438L, Durazone, Naugard SFR, and WAND (chlorinated ester). Waste drums and/or barrels, 1 baghouse filter, and 2 scrubber systems identified during 1993 RFA. **Former Designation: SWMU #42, SWMU #43, and SWMU #44 (W&C, 1993)**	ETPH, VOCs, SVOCs, Reactivity (S) (Table 1 - W&C 2007)	Yes	Yes	Yes	•A sitewide ELUR will be implemented to limit land use to industrial/commercial. •During redevelopment, remediation will be performed by rendering soil inaccessible and/or environmentally isolated in accordance with the RSRs. •Soil may also be excavated and consolidated beneath an engineered control currently planned in the vicinity of AOC-75. •Remediation details will be provided in a future addenda to the RAP.
AOC 51	Building 310 Lab Waste Storage Area Building 310 has been used as part of the non-manufacturing operations on-site and is still currently active. Laboratory waste storage area located in Building 310 served as a RCRA regulated <90-day storage unit. Also includes fume hoods and chemical transport carts identified during 1993 RFA. **Former Designation: SWMU #33, SWMU #38, and SWMU #42 (W&C, 1993)**	N/A	N/A	N/A	N/A	•A sitewide ELUR will be implemented to limit land use to industrial/commercial. •This area is located on the portion of the Site that is outside of the redevelopment project, with only minor cut and fill around the periphery of the property. •Remediation details will be provided in a future addenda to the RAP.
AOC 52	Building 317 Building 317 used for chemical processing including n-DPA, DPA, and flexamine. Building taken out of service in 1990 and demolished in 2000. **Former Designation: Building 317 (CRA, 2004)**	PCBSs, SVOCs, VOCs, Metals (W&C 2010)	Yes	Yes	Yes	•A sitewide ELUR will be implemented to limit land use to industrial/commercial. •During redevelopment, remediation will be performed by rendering soil inaccessible and/or environmentally isolated in accordance with the RSRs. Soil may also be excavated and consolidated beneath an engineered control currently planned in the vicinity of AOC-75. •Based on the future use and redevelopment plans for the Site, which includes the installation of a cap, PCB Remediation Wastes within the Subject Area will be remediated to the high occupancy cleanup standard with the installation of a cap of< 10 mg/kg •An existing RAP and TSCA Cleanup Plan is already in place for this area. This RAP and TSCA Cleanup Plan has been updated to incorporate additional data and planned integration with the development-based RAP(s) for the Site. This updated RAP is under review by the EPA. •Constituents of concern other than PCBs will be addressed under a separate sitewide RAP submitted to the CTDEEP
AOC 53	Building 321/Building 321 Tank Farm Building 321 was used for on-site manufacturing. Floor trenching observed within the building. **Former Designation: SWMU # 41 (W&C, 1993)**	VOCs, SVOCs, Metals	Yes	Yes	No (no SPLP analyisis for Metals; some samples exceed the "20-times rule")	•A sitewide ELUR will be implemented to limit land use to industrial/commercial. •During redevelopment, remediation will be performed by rendering soil inaccessible and/or environmentally isolated in accordance with the RSRs. Soil may also be excavated and consolidated beneath an engineered control currently planned in the vicinity of AOC-75. •Remediation details will be provided in a future addenda to the RAP.
AOC 54	Building 617 Building 617 was used as part of the non manufacturing operations on-site. Two parts cleaning units were identified during the 1993 RFA. **Former Designation: SWMU #45 (W&C, 1993)**	N/A	N/A	N/A	N/A	•A sitewide ELUR will be implemented to limit land use to industrial/commercial. •Remediation of this area will be performed as part of sitewide redevelopment. Prior to or during redevelopment activities, additional sampling may be performed to document soil conditions. •Remediation details will be provided in a future RAP submittal
AOC 55	Building 618 Building 618 was used as part of the non-manufacturing operations on-site. Five parts cleaning units were identified during 1993 RFA. **Former Designation: SWMU #45 (W&C, 1993)**	N/A	N/A	N/A	N/A	•A sitewide ELUR will be implemented to limit land use to industrial/commercial. •Remediation of this area will be performed as part of sitewide redevelopment. Prior to or during redevelopment activities, additional sampling may be performed to document soil conditions. •Remediation details will be provided in a future RAP submittal
AOC 56	Building 668 Building 668 is the facility Boiler House. Historically fuel for boilers was fuel oil as well as a mixture of #6 Fuel Oil and nonenes for recycling of nonene wastes. One parts cleaner and one fly ash hopper identified during 1993 RFA. **Former Designation: SWMU #15 and SWMU #45 (W&C, 1993)**	N/A	N/A	N/A	N/A	•A sitewide ELUR will be implemented to limit land use to industrial/commercial. •Remediation of this area will be performed as part of sitewide redevelopment. Prior to or during redevelopment activities, additional sampling may be performed to document soil conditions. •Remediation details will be provided in a future RAP submittal
AOC 57	Building 677 Floor trenching was identified within Building 677 during 1993 RFA. **Former Designation: SWMU # 41 (W&C, 1993)**	VOCs, SVOCs, Metals	Yes	Yes	No *(no SPLP samples were analyzed for Metals; any exceedances are tentative and based on the "20x Rule")*	•A sitewide ELUR will be implemented to limit land use to industrial/commercial. •Remediation of this area will be performed as part of sitewide redevelopment. •Prior to or during redevelopment activities, additional sampling may be performed to further document soil conditions. •Remediation details will be provided in a future RAP submittal
AOC 58	Building 681 Building 681 was used as part of the non-manufacturing operations on-site. One 55-gallon waste oil drum containing waste oil from Building 681 machinery identified during 1993 RFA. **Former Designation: SWMU #14 (W&C, 1993)**	N/A	N/A	N/A	N/A	•A sitewide ELUR will be implemented to limit land use to industrial/commercial. •Remediation of this area will be performed as part of sitewide redevelopment. Prior to or during redevelopment activities, additional sampling may be performed to document soil conditions. •Remediation details will be provided in a future RAP submittal
AOC 59	No. 6 Fuel Oil Tank No. 6 fuel oil used in boiler house. Above ground storage tank located adjacent to boiler house (referenced in RFA W&C 1993 SWMU #6). **Former Designation: None**	N/A	N/A	N/A	N/A	•A sitewide ELUR will be implemented to limit land use to industrial/commercial. •Remediation of this area will be performed as part of sitewide redevelopment. Prior to or during redevelopment activities, additional sampling may be performed to document soil conditions. •Remediation details will be provided in a future RAP submittal

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AOC 60	Drum Roll off Roll off adjacent to Building 55 for the disposal of cleaned drums. Roll off no longer on-site. **Former Designation: SWMU #37 (W&C, 1993)**	N/A	N/A	N/A	N/A	•No additional investigation warranted.
AOC 61	Building 75 Tank Farm Storage of bulk chemicals including Hydrochloric acid, xylene, and 2-ME. **Former Designation: None**	VOCs, SVOCs, Metals	Yes	Yes	Yes	•A sitewide ELUR will be implemented to limit land use to industrial/commercial. •During redevelopment, remediation will be performed by rendering soil inaccessible and/or environmentally isolated in accordance with the RSRs. Soil may also be excavated and consolidated beneath an engineered control currently planned in the vicinity of AOC-75. •Remediation details will be provided in a future addenda to the RAP.
AOC 62	Building 79 Tank Farm Multiple above ground storage tanks located south of Building 79 (AOC #36). Storage of bulk chemicals including acetone, aniline, DPA, and BLE. **Former Designation: SWMU #31 and Acetone Storage Tank (W&C, 1993).**	ETPH, VOCS, SVOCs (Table 1 - W&C 2007, W&C 2014)	Yes	Yes	Yes	•Soil remediation already implemented. A sitewide ELUR will be implemented to limit land use to industrial/commercial. •During redevelopment, remediation will be performed by rendering soil inaccessible and/or environmentally isolated in accordance with the RSRs. Soil may also be excavated and consolidated beneath an engineered control currently planned in the vicinity of AOC-75. •DNAPL extraction continues to be performed in the vicinity of this area. •Remediation details will be provided in a future addenda to the RAP.
AOC 63	Building 88/94 Tank Farm Storage of bulk chemicals including Nonenes, dimethyl-hylamine, propylene oxide, heptane, caustic, Naugalube 438 L, antioxidant AO451 sludge, zinc water, ethylchloride, formaldehyde, and diisobutylene. **Former Designation: None**	ETPH, VOCs, SVOCs, Reactivity (S) (Table 1 - W&C 2007)	Yes	Yes	Yes	•A sitewide ELUR will be implemented to limit land use to industrial/commercial. •During redevelopment, remediation will be performed by rendering soil inaccessible and/or environmentally isolated in accordance with the RSRs. Soil may also be excavated and consolidated beneath an engineered control currently planned in the vicinity of AOC-75. •Remediation details will be provided in a future addenda to the RAP.
AOC 64	Building 120 Tank Farm Storage of bulk chemicals. **Former Designation: None**	VOCs, SVOCs, Metals	Yes	Yes	Yes	•A sitewide ELUR will be implemented to limit land use to industrial/commercial. •During redevelopment, remediation will be performed by rendering soil inaccessible and/or environmentally isolated in accordance with the RSRs. Soil may also be excavated and consolidated beneath an engineered control currently planned in the vicinity of AOC-75. •Remediation details will be provided in a future addenda to the RAP.
AOC 65	Building 124 Tank Farm Storage of bulk chemicals including Naugard SFR Wastewater, triacetonamine, ethylbenzene, hexanol, High pH waste, aluminum chloride solution, and carbon bisulfide. (Excludes Tar Storage Tank). **Former Designation: None**	VOCs, SVOC, Metals	Yes	Yes	Yes	•A sitewide ELUR will be implemented to limit land use to industrial/commercial. •During redevelopment, remediation will be performed by rendering soil inaccessible and/or environmentally isolated in accordance with the RSRs. Soil may also be excavated and consolidated beneath an engineered control currently planned in the vicinity of AOC-75. •Remediation details will be provided in a future addenda to the RAP.
AOC 66	Former Underground Acetone Storage Tank 35,000 gallon UST installed in 1998 for the storage of acetone. Located south of Building 79 and Building 79 Tank Farm. **Former Designation: None**	VOCs	No	N/A	N/A	•No additional work warranted based on results of the UST removal activities. No Release
AOC 67	Aniline Sludge Pits Two 30 ft. x 20 ft. aniline sludge pits located south of Building 73 used historically for dewatering liquid aniline waste. Sludge generated by the dewatering was disposed in the South Yard (iron oxide sludge). Both pits were scraped out and backfilled in the mid-1950s. **Former Designation: SWMU #46 Aniline Sludge Pits (W&C, 1995)**	Yes	Yes	No	No *(no SPLP samples were analyzed for Metals; any exceedances are tentative and based on the "20x Rule")*	•A sitewide ELUR will be implemented to limit land use to industrial/commercial. •During redevelopment, remediation will be performed by rendering soil inaccessible and/or environmentally isolated in accordance with the RSRs. Soil may also be excavated and consolidated beneath an engineered control currently planned in the vicinity of AOC-75. •Remediation details will be provided in a future addenda to the RAP. •This area is likely to be considered together with AOC-45
AOC 68	Unloading Docks Three unloading docks used historically for the transfer of bulk chemicals for use in production processes. **Former Designation: None**	VOCs, SVOCs, Metals	Yes	No	Yes	•A sitewide ELUR will be implemented to limit land use to industrial/commercial. •Remediation details will be provided in a future addenda to the RAP.
AOC 69	Coagulation Pit Coagulation pit used for the coagulation of effluent material from the SBR rubber processing operations. **Former Designation: None**	N/A	N/A	N/A	N/A	•A sitewide ELUR will be implemented to limit land use to industrial/commercial. •During redevelopment, remediation will be performed by rendering soil inaccessible and/or environmentally isolated in accordance with the RSRs. Soil may also be excavated and consolidated beneath an engineered control currently planned in the vicinity of AOC-75. •Remediation of this area will be performed as part of sitewide redevelopment. Prior to or during redevelopment activities, additional sampling may be performed to document soil conditions. •Remediation details will be provided in a future addenda to the RAP.

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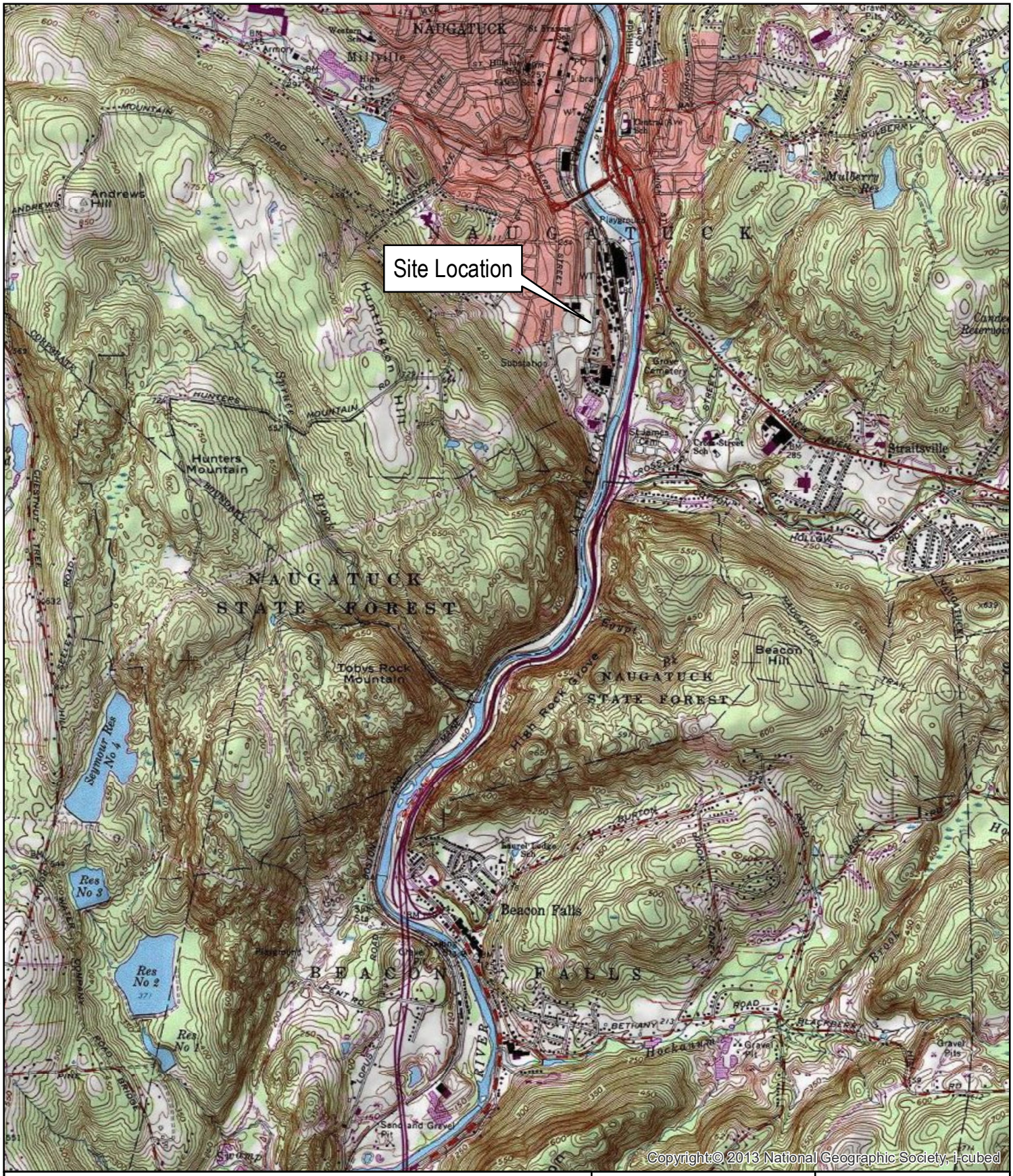
AOC 70	Less Than 90 Day Container Storage Area Unit #3 This container storage area is located in Building 306. The area was constructed in 2000 for the temporary storage of investigation and remediation derived wastes. The Storage Area is currently active. **Former Designation: None**	VOCs, SVOCs, Metals, PCBs	No	N/A	N/A	•No additional work warranted based on results of closure sampling.
AOC 71	Former Fuel Tank System Two USTs, one 6,000 gallon unleaded gasoline tank and one 1,000 gallon diesel fuel tank used for fueling facility vehicles. System consisted of the two USTs, a concrete vehicle pad with catch basin, and a 5,000 gallon oil/water separator installed in 1997. Discharge from oil/water separator to site stormwater system. **Former Designation: None**	VOCS, SVOCs, ETPH, Metals	No	N/A	N/A	•No additional work warranted based on results of the UST removal activities and the results from investigation of the oil-water separator.
AOC 72	Trash and Cardboard Compactors Two electric trash compactors located in open area between buildings 617 and 682. **Former Designation: SWMU #36 (W&C, 1993)**	N/A	N/A	N/A	N/A	•No investigation required.
AOC 73	Facility Wide Dumpsters Dumpsters located throughout facility for disposal of general refuse including cardboard, packaging, misc. non-chemical solids, and general trash. **Former Designation: SWMU #39 (W&C, 1993)**	N/A	N/A	N/A	N/A	•No investigation required.
AOC 74	Site Wide Underground Piping System Facility-wide piping connected each building to main pipe. Historically, discharge was directed to Naugatuck River. Piping connected to PTP in 1974. **Former Designation: SWMU #40 (W&C, 1993)**	N/A	N/A	N/A	N/A	•A sitewide ELUR will be implemented to limit land use to industrial/commercial. •During redevelopment, remediation will be performed by rendering soil inaccessible and/or environmentally isolated in accordance with the RSRs. •Soil may also be excavated and consolidated beneath an engineered control currently planned in the vicinity of AOC-75. •Remediation of this area will be performed as part of sitewide redevelopment. Prior to or during redevelopment activities, additional sampling may be performed to document soil conditions. •Remediation details will be provided in a future addenda to the RAP.
AOC 75	Combined PCB Area The combined PCB area is a location on Site that consists of the combination of two PCB release areas in close proximity to each other. The two areas are the Reclaim Building Switchgear and Transformer Area (RBTA) and the Stockpiles from the Reclaim Building and Building 317. Beginning in the 2018 Combined PCB Area report, these areas were treated as a new AOC. **Former Designation: None**	PCBs, VOCs, SVOCs, Metals	Yes	Yes	Yes	•A sitewide ELUR will be implemented to limit land use to industrial/commercial. •A Risk-Based Cleanup and Disposal Plan and Remedial Action Plan was submitted to CT DEEP and EPA for this area in September 2021. PCB removal, off-site disposal, and confirmatory sampling will be performed in accordance with an EPA-approved plan and the CT RSRs. •The overall site redevelopment plan includes installation of an engineered control as described in the RSRs across a portion of the facility that encompasses the limits of PCB impacts in AOC-75. The purpose of this larger engineered control is to provide an area to consolidate soil containing elevated concentrations of non-PCB constituents that will be excavated during redevelopment. To comply with the RSRs, this larger engineered control will require CT DEEP approval of an engineered control variance and recording of an Environmental Use Restriction (EUR) or an ELUR. Approval also requires financial assurance and long-term maintenance and monitoring. •The engineered control will be designed to render soil both inaccessible and environmentally isolated (i.e., it will incorporate a low-permeability liner). A two-part engineered control variance application, using forms published by CT DEEP, will be submitted for CT DEEP review and approval prior to construction. The applications will include a summary of analytical data and other details to support review and approval by CT DEEP. The plan to construct this soil consolidation area and engineered control has already been communicated and discussed with CT DEEP and is part of the Site's redevelopment plan.
AOC 76	Ecological Risk Assessment Area Discussion was held with CTDEEP in 2017 regarding ecological risk assessment at the Site. Based on these discussions, groundwater in the vicinity of MW-3 targeted for further assessment of metals (Cd, Cu, Zn). The metals-impacted area located near MW-3 was designated as AOC-76. **Former Designation: None**	Metals	Yes	Yes	Yes	•A sitewide ELUR will be implemented to limit land use to industrial/commercial. •A full-scale remediation is currently being designed for this area to evaluate in-situ stabilization of metals in soil and removal from groundwater. •Remediation details will be provided in a future addenda to the RAP.
AOC 77	Former Foundry and Fill Area Historic Maps show the L & W Ward Curtain and Screw Ring facility was located in the north of the Site, between the railroad and the Naugatuck River. During assessment activities, no indication of environmental impacts from foundry waste was observed. Fill material contained some elevated concentrations of PAHs and metals. AOC #77 Potential Former Foundry. **Former Designation: None**	Metals, SVOCs (PAHs Only) (W&C 2022)	Yes (fill related)	Yes	Yes	•A sitewide ELUR will be implemented to limit land use to industrial/commercial. •During redevelopment, remediation will be performed by rendering soil inaccessible and/or environmentally isolated in accordance with the RSRs. Soil may also be excavated and consolidated beneath an engineered control currently planned in the vicinity of AOC-75. •Remediation of this area will be performed as part of sitewide redevelopment. Prior to or during redevelopment activities, additional sampling may be performed to document soil conditions. •Remediation details will be provided in a future addenda to the RAP.

FIGURES

Figure 1: Site Location Map

Figure 2: Site Plan

Figure 3: Sitewide Redevelopment Plan



Site Location Map

Former Crompton
Manufacturing Co. Site Naugatuck, Connecticut

Figure 1

N

1 in = 0.5 miles

0 0.125 0.25 0.5 Miles

Woodard & Curran

Project #: 206644
Map Created: September 2021

Figure Exported: 9/12/2021 By: Kelich Using: \\woodardcurran.net\shared\Projects\206644 Crompton Naugatuck CtWip\GIS\Project Files\2021 COI Report\Fig 1 - Site Location Map.mxd

CHERRY STREET EXT.

LOT 1B
12 SPENCER STREET
LANXESS
PARCEL AREA
195,282 SF
7.07 AC

SPENCER STREET

NOTE: PARCEL C IS NOT APART OF PROPERTY

ELM STREET

280 ELM STREET

LOT 1A
BOROUGH OF
NAUGATUCK
2,170,008 SF
49.82 AC

NEW YORK, NEW HAVEN & HARTFORD RAILROAD

LOT 3
BOROUGH OF
NAUGATUCK
846,944 SF
19.44 AC

NAUGATUCK RIVER

Source: Esri, Maxar, Earthstar Geographics, IGN, and the GIS User Community

Figure 2

Plot Plan

Former Uniroyal Facility
Naugatuck, CT

Legend

- Retained Parcel
- Site Boundary
- Property Line
- Phase 1 Construction Area
- Site Buildings & Features

Notes:
1. Property lines, retained parcel, and Phase 1 construction area are based on the following drawings received from Civil 1: "3535-ALTA.dwg" and "3535-TOPO.dwg" received on May 31, 2023 and the 80% design drawing received on May 17, 2023. The Borough of Naugatuck's Assessor's maps have not yet been updated to reflect these parcels.

0 250 500 1,000 Feet

N

Woodard & Curran

Project #: 206644
Map Created: June 2023

LEGEND

- PROPERTY LINE
- PROPOSED BUILDING SETBACK LINE
- EXISTING PAVEMENT TO REMAIN
- PROPOSED PAVEMENT
- EXISTING PAVEMENT TO BE REMOVED

CHERRY STREET EXT.

CHERRY STREET

CHARLES

BUILDING 'C'
28,500 sf
FFE = 230.0

BUILDING WING
240' X 260'
62,400 SF

FFE = 254.0

WAREHOUSE
TOTAL = 206,450 SF

BUILDING WING
335' X 430'
144,050 SF

FFE = 254.00

SHEET C-2.1

SHEET C-2.2

CHERRY STREET EXT.

LANXESS

SPENCER STREET

WARD STREET

LIMITS OF CONSTRUCTION

EX. LANXESS DRIVEWAY TO REMAIN

PROPOSED LANXESS DRIVE

LANXESS

LIMITS OF CONSTRUCTION

EXISTING LANXESS DRIVE

ELM STREET

BUILDING 'D'
40,000 sf
FFE = 250.0

BUILDING 'E'
60,000 sf
FFE = 238.0

BUILDING 'F'
74,000 sf
FFE = 185.0

BUILDING 'G'
30,000 sf
FFE = 182.0

NEW YORK, NEW HAVEN & HARTFORD RAILROAD

EXISTING HAUL ROAD

PROPOSED THROUGH ROAD

MON

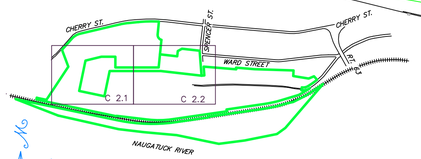
NEW YORK, NEW HAVEN & HARTFORD RAILROAD

NAUGATUCK RIVER

NAUGATUCK RIVER

NAUGATUCK RIVER

NAUGATUCK RIVER



SHEET INDEX

NO.	REVISION	DATE
	Previous Editions Obsolete	

100 0 50 100 200

1 inch = 100 ft.

BOROUGH OF NAUGATUCK
229 CHURCH STREET
NAUGATUCK, CT 06770

CLIENT

OVERALL SITE LAYOUT PLAN

NAUGATUCK INDUSTRIAL COMMONS
PHASE III
LANXESS SITE IMPROVEMENTS

NAUGATUCK CONNECTICUT

CIVIL C1
CORNERSTONE PROFESSIONAL PARK, SUITE D-101
43 SHERMAN HILL ROAD
WOODBURY (203) 266 - 0778 CONNECTICUT

STATE OF CONNECTICUT
CURTIS C. JOHNSON
No. 21208
LICENSED PROFESSIONAL ENGINEER

DRAWN: BB APPROVED: CJ
SCALE: 1" = 100'
DATE: 17 MAY 23
PROJ. NO.: 3535
CADD FILE NAME: 3535
DRAWING NO.:

C-2.0

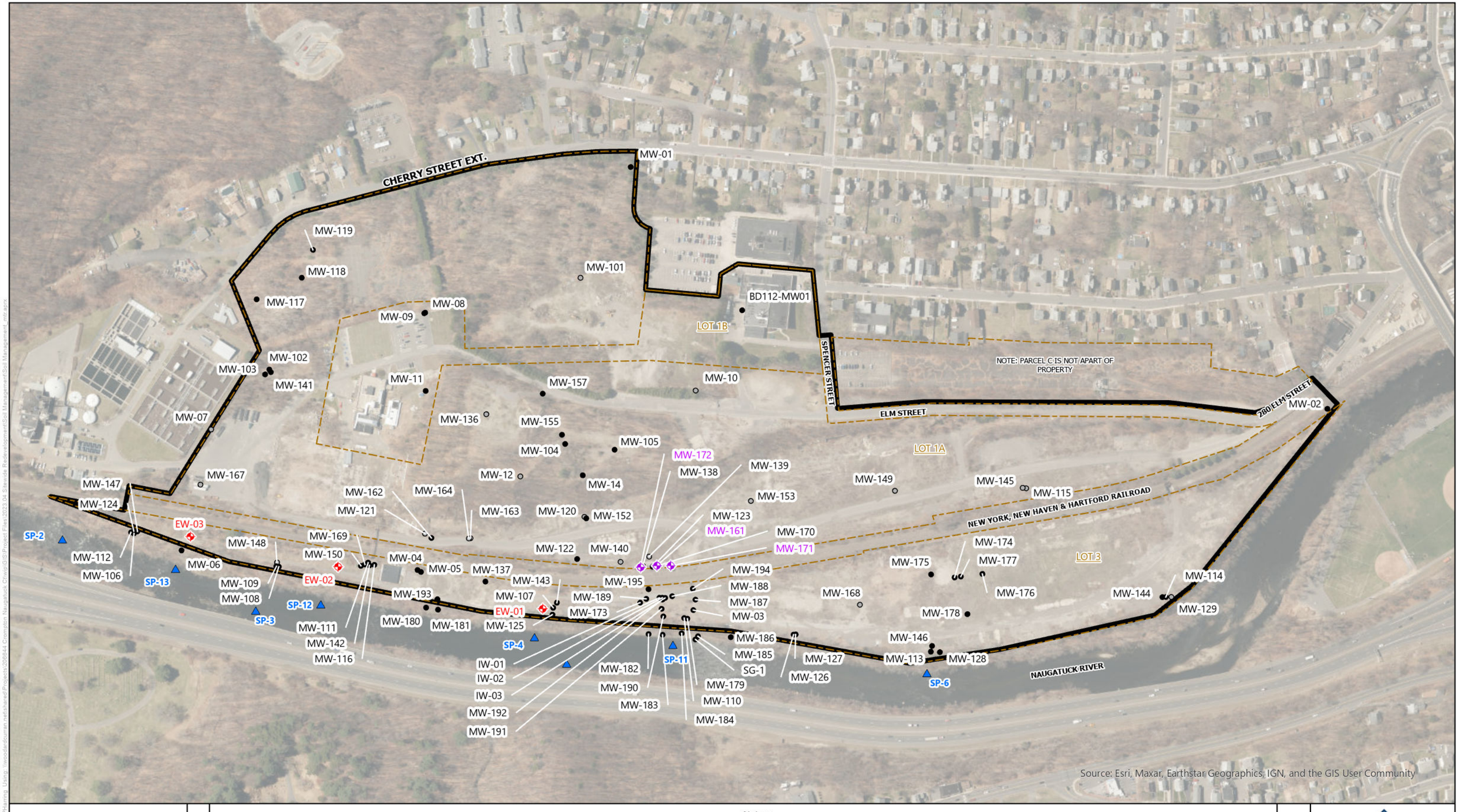


Figure 4

Site Features

Former Uniroyal Facility
Naugatuck, CT

Legend

- Surface Water Sampling Locations
- DNAPL Recovery Wells
- Extraction Wells
- Monitoring Well Locations
- Destroyed or Abandoned Monitoring Well Location
- Property Boundaries
- Site Boundary

Notes:
1. Property lines, retained parcel, and Phase 1 construction area are based on the following drawings received from Civil 1: "3535-ALTA.dwg" and "3535-TOPO.dwg" received on May 31, 2023 and the 80% design drawing received on May 17, 2023. The Borough of Naugatuck's Assessor's maps have not yet been updated to reflect these parcels.

0 250 500 1,000 Feet

N

Woodard & Curran

Project #: 206644
Map Created: June 2023

Area of Concern (AOC) Key:

1. Hazardous Waste Container Storage Area #1
2. Hazardous Waste Storage Area #2
3. Building 54 Laboratory Sample Storage Unit
4. Temporary Drum Storage Unit
5. Tank System (Tank 33C)/Tank Farm 109
6. Nonenes Underground Storage Tank
7. Nonenes Aboveground Storage Tank
8. Waste Nonenes Storage Pad
9. Tank System (Tank 135C)
10. Drum Lot
11. Tire Lot
12. Pretreatment Plant Drain Line
13. South Yard Fill material
14. Ground Staining Bldgs. 601/604
15. Building 676 Concrete Vats
16. Former Coal Storage Area
17. Railroad Tie Storage Area
18. Pretreatment Plant - Equalization Tanks
19. Pretreatment Plant - Clarifier
20. Pretreatment Plant - Lift Station
21. Pretreatment Plant - Sludge Pit
22. Material Storage Area
23. Fire Training Area
24. Building 84 Condensate Sump
25. Building 81 Wastewater Sump
26. Building 55 Condensate Sump
27. River Sediment
28. Building 47
29. Building 52
30. Building 54
31. Building 55 Drum Cleaning Area
32. Building 58
36. Building 79
37. Building 80
38. Building 81
39. Building 86
40. Building 88
41. Building 89
42. Building 94
43. Building 100
44. Building 101E
45. Building 101W
46. Building 109
47. Building 111
48. Building 112
49. Building 121
50. Building 124
51. Building 310 Lab Waste Storage Area
52. Building 317
53. Building 321
54. Building 617
55. Building 618
56. Building 668
57. Building 677
58. Building 681
59. No. 6 Fuel Oil Tank
60. Drum Rolloff
61. Building 75 Tank Farm
62. Building 79 Tank Farm
63. Building 88/94 Tank Farm
64. Building 120 Tank Farm
65. Building 124 Tank Farm
66. Underground Acetone Storage Tank
67. Aniline Sludge Pits
68. Unloading Docks
69. Coagulation Pit
70. Less Than 90 Day Container Storage Area #3
71. Fuel Tank System
72. Trash and Cardboard Compactors
73. Facility Wide Dumpsters (Not Shown)
74. Site Wide Underground Piping System (Not Shown)
75. Combined PCB Investigation Area
76. Ecological Risk-MW-3 Area Metals Impacts
77. Potential Former Foundry

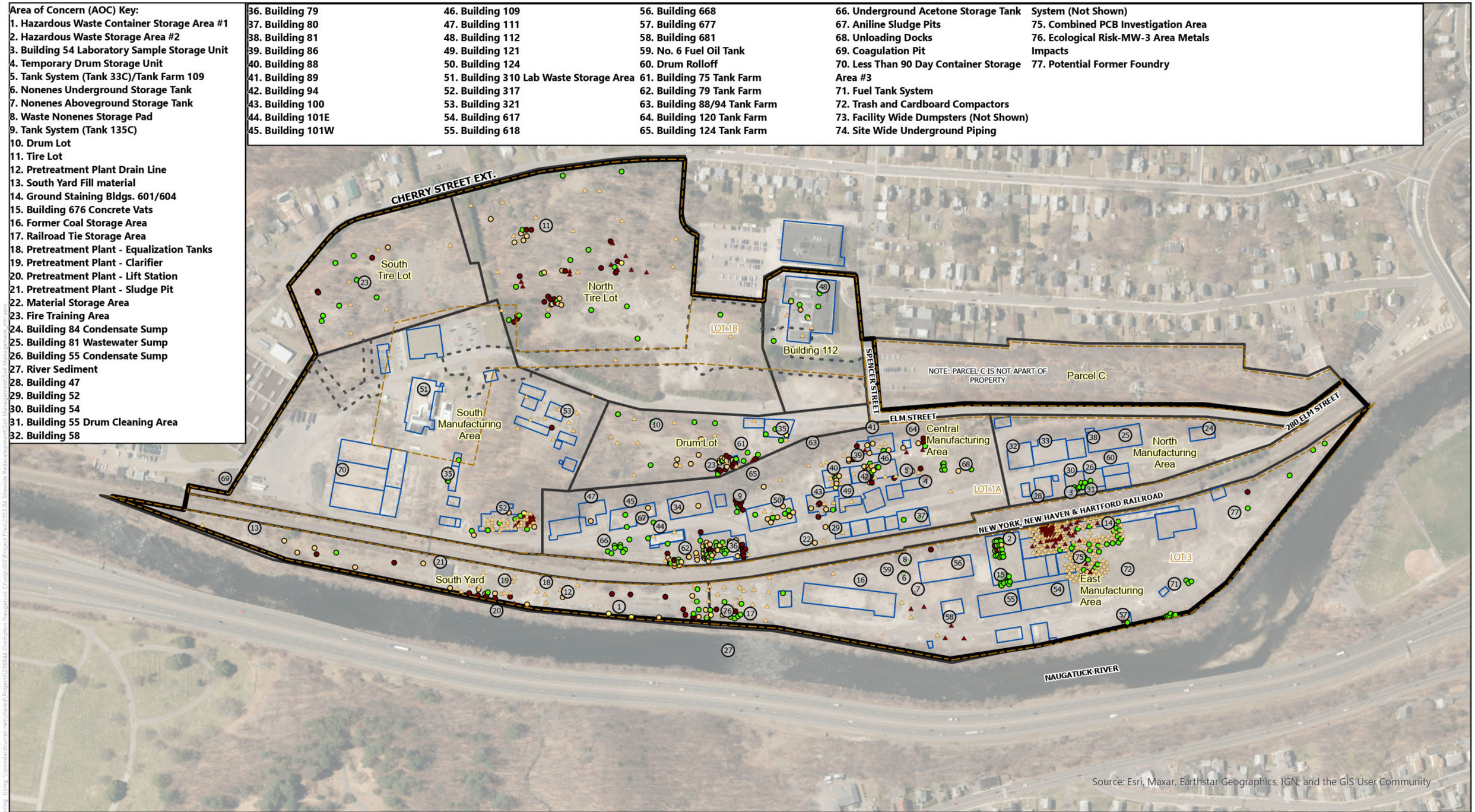


Figure 5

Sitewide RSR Exceedances in Soil

Former Uniroyal Facility

Naugatuck, CT

Legend

Soil Exceedance Categories

- GBPMC and ICDEC Exceedance
- No Exceedance
- ICDEC Exceedance
- Converted GBPMC Exceedance
- GBPMC Exceedance
- Converted GBPMC and ICDEC Exceedance

- Site Areas
- AOCs
- Property Boundaries
- Phase 1 Construction Area
- Site Boundary
- Current and Former Site Buildings & Features

Notes:

1. The soil exceedance categories displayed here are a conservative estimate based on the maximum exceedance across all depths sampled at a given location.
2. Converted GBPMC indicates that the result was compared to the standard using one of the following approaches:
   - For inorganic analytes and PCBs, mass-based sample results were divided by 20 and compared to the applicable SPLP-based GBPMC standard, as specified in 22a-133k-2(c)(1)(A)(ii) of the RSRs.
   - For organic analytes, SPLP results were divided by 10 and compared to the GWPC standard, as specified in Section 22a-133k-2(c)(3)(A)(i) of the RSRs.
3. These soil exceedance categories will be used to inform the future soil management based on the redevelopment plans. The final soil management category will depend on planned redevelopment activity and may be based on additional characterization data.
4. Property lines, retained parcel, and Phase 1 construction area are based on the following drawings received from Civil 1: "3535-ALTA.dwg" and "3535-TOPO.dwg" received on May 31, 2023 and the 80% design drawing received on May 17, 2023. The Borough of Naugatuck's Assessor's maps have not yet been updated to reflect these parcels.

0 250 500 1,000 Feet

N

Woodard & Curran

Project #: 206644
Map Created: June 2023

APPENDIX A: BUILDING 112 SUPPLEMENTAL INFORMATION

Woodard & Curran

woodardcurran.com

Attachment E

STATE OF CONNECTICUT
DEPARTMENT OF ECONOMIC AND COMMUNITY DEVELOPMENT

BIDDING, CONTRACTING & CONSTRUCTION GUIDELINES FOR STATE PROGRAMS

Revision: May 2019

DAVID LEHMAN
COMMISSIONER

TABLE OF CONTENTS

1. INTRODUCTION

The intent of these Bidding, Contracting and Construction Guidelines is to provide the guidance and the requirements needed to ensure a successful DECD sponsored project. It is DECD's policy to maximize the benefits derived from the use of public funds, protect these funds from inappropriate use, and ensure that all Federal, State and Local requirements are met.

To maximize the benefits of the State's public funds, DECD's requires a competitive public procurement process of all major contracts for construction. Competitive public bidding is a standard practice within the public works construction industry and provides numerous benefits such as:

a. Cost savings to the Client and State
b. Fair competition for construction contracts
c. Ensuring the use of qualified contractors

The DECD has prepared these guidelines to assist our clients through the agency's requirements and policies. These guidelines reference definitions, client responsibilities, categories of work, project planning to ensure Connecticut Environmental Policy Act (CEPA) compliance and various State agencies' laws & regulations, the requirements of a publicly advertised competitive bid process for construction activities, selection and contracting for construction, DECD's progress monitoring of construction, and the required documents from bidding on through to Construction Closeout.

Any Client modification or change to the bidding or selection process must be pre-approved by DECD.

2. DEFINITIONS

a. **Public Building** (C.G.S. section 1-1(e)): …shall include a statehouse, courthouse, townhouse, arsenal, magazine, prison, community correctional center, almshouse, market or other building belonging to the state, or any town, city, borough in the state, and any church, chapel, meetinghouse, or other building generally used for religious worship, and any college, academy, schoolhouse or other building generally used for literary instruction."

b. **Public Works Contract** (C.G.S. Sec. 46a-68b): "…means any agreement between any individual, firm or corporation and the state or any political subdivision of the state for construction, rehabilitation, conversion, extension, demolition or repair of a public building, highway or other changes or improvements in real property, or which is financed in whole or in part by the state, including, but not limited to, matching expenditures, grants, loans, insurance or guarantees and "municipal public works contracts", "quasi-public agency project" and "awarding agency." Have the same meanings as provided in section 4a-60g, as amended by this act. "Municipal public works contracts" and "quasi-public agency project" are also subject to contract compliance requirements. Please see the definitions for "municipal public

works contract", quasi-public agency project", and "awarding agency" in C.G.S. section 4a-60g (a)(as amended by June SS Public Act 15-5).

c. Competitive Bidding (the Architect's Handbook of Professional Practice, Vol. 2, AIA 1987): Competitive bidding seeks to find the lowest reasonable price for the project through competition for the work. The theory is that many interested contractors have access to the project and that head-to-head competition will produce the best possible price consistent with marketplace conditions.

3. CONFLICT OF INTEREST NOTICE AND CLIENT RESPONSIBILITY

a. Members and relations of the governing body and/ or staff of the client shall be prohibited from receiving contracts for materials or services related to the Construction/ Renovation.

b. DECD shall review project documents to ensure consistency with project goals, department standards and technical correctness. However, it is the responsibility of the client, their architect and attorney to ensure that the documents are technically correct, complete and, where necessary, protect the grantee and the State of Connecticut from any and all claims.

c. The client will comply with all relevant local, state and federal regulations, and comply with all standard contracting practices to safeguard the interests of the client and the state including, but not limited to, contractor performance, security, insurance, permits, and inspections.

d. The client shall erect a suitable sign attributing funding to State of Connecticut, Governor; Department of Economic and Community Development, and Commissioner. A sign template is attached to this document.

4. CATEGORIES OF WORK

a. Emergency Work: Public Health and Safety Improvements. DECD must approve any exemption from the bidding process for Emergency Work.

b. Minor Construction/Renovation: Single trade tasks and/or non-complex construction with a total value of $100,000 or less.

c. Major Construction/Renovation: multiple-interrelated trade tasks and/or complex construction with a total value of over $100,000.

d. Brownfield Site: A brownfield is a real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. The physical environmental clean-up or remediation of a brownfield site is considered a change in real property therefore a construction activity.

e. Individual physical development contracts under $10,000 in value shall not be subject to competitive bid requirements.

f. For projects only requiring material purchases see section 13.

g. For projects with a total project cost of $250,000 or less see section 12.

5. CATEGORIES OF CLIENTS

a. The nature of the project and the organization of DECD's client determine whether a project's construction contracts are publicly advertised for competitive bidding. Publicly advertised competitive bidding may also be appropriate for certain clients and/or projects. A public competitive process will help the client locate qualified firms and establish a market rate for the improvements.

b. Please refer to the table below as a guide for compliance with the contract solicitation process.

Client Category	**Project Category**	**Public Competitive Bid**	**Competitive Bid**
Financial assistance to for-profit corporation for WC, M&E, Training, etc.	Private	No	No
Financial assistance to for-profit corporation for building, site or infrastructure improvements.	Private	No	Recommended
Financial assistance to not-for-profit corporation for WC, M&E, Training, etc.	Private	Yes	Yes
Financial assistance to not-for-profit corporation for building, site or infrastructure improvements when acting on behalf of a municipality	Public	Yes	Yes
Financial assistance to not-for-profit corporation for building, site or infrastructure improvements when acting on behalf of a municipality	Private	Recommended	Local Procurement Process
Financial assistance to not-for-profit corporation for building, site or infrastructure improvements when acting for their own interests where state funding is less than 25% of the total project cost	Private	Highly Recommended	Yes
Financial assistance to not-for-profit corporation for building, site or infrastructure improvements when acting for their own interests where state funding is greater than 25% of the total project cost	Private	Yes	Yes
Financial assistance to municipalities for construction/improvements of public infrastructure/public land	Public	Yes	Yes

6. CONSTRUCTION MANAGERS IN PLACE OF GENERAL CONTRACTORS

The DECD grantee may employ a construction manager, but if this management method is used, each subcontract must be bid employing the same procedures outlined above with a minimum of three bids for each subcontractor, advertising for each and compliance with bonding, insurance, and minority regulations. Any specific construction trade work to be conducted by the construction manager requires DECD pre-approval.

7. PLANNING/PERMITTING – CEPA COMPLIANCE

a. **CEPA** - Sections 22a-1 through 22a-1h of the C.G.S. establish an environmental policy for Connecticut and a process for evaluating the environmental impacts of State actions. The process is further defined by Sec. 22a-la-1 through 22a-la-12 of the Regulations of Connecticut State Agencies.

b. **Floodplain -** The FEMA Flood Insurance Rate Map (FIRM) of the project boundary must be reviewed by the project design professional during the design phase. If the project proposes an activity within or affecting a floodplain or that impacts storm drainage facilities, the DECD must submit a Flood Management Certification to DEEP (C.G.S. 25-68b through 25-68h). The grantee's design professional will be responsible for preparing the application and submission to DECD for review and subsequent certification to DEEP. DECD will not approve or fund any construction activities until certification has been accepted by the DEEP. Flood Management Certification must be approved prior to the completion of the bid package.

c. **Historic Considerations –** Projects involving the renovation, rehabilitation, or additions to Historic buildings or sites will require consultation with the State Historical Preservation Commission (SHPO). Documentation of such consultation and approval by SHPO will be required. Historic buildings are defined as properties listed on the State or National Register for Historic Places, or properties eligible for listing on the State or National Register for Historic Places. Properties 50 years old or older are potentially eligible for listing. Historic sites are defined as sites that have yielded, or may be likely to yield, information important in prehistory or history. If you are unsure, please contact SHPO (860-500-2337 or at Todd.Levine@ct.gov).

d. **Hazardous Materials –** It is the grantee's responsibility to investigate the possible existence of hazardous materials and evaluate their impact on the proposed project. Hazardous materials include, but are not limited to, lead based paint, asbestos containing materials, PCBs etc. If hazardous materials are present on the project site or in existing buildings, appropriate mitigation, remediation must be included in the scope of work, plans and specifications.

e. **Approvals –** The grantee shall review any factors in conflict with the use of the site or the planned project on the site to be developed or rehabilitated (e.g. building lines, zoning regulations, local ordinances, codes or other pertinent regulations or restrictions). Particular attention should be given to projects that will involve a change in use. The grantee shall obtain all necessary local,

state, federal and utility companies' approvals and any special permits, variances or waivers that may be required.

8. WAGE RATES

a. As per C.G.S. Sec. 31-53, municipal grantees shall pay prevailing wages rates on a Public Works Contract. Under current law, the state or political subdivision must award the construction contract and be a party to the construction contract and not a mere grantor of funds for the project to require prevailing wage rates.

b. The provisions of C.G.S. Sec. 31-53 do not apply when the total project cost of all work to be performed by all contractors and subcontractors in connection with new construction of any public works project is less than $1,000,000 or where the total cost of all work to be performed by all contractors and subcontractors in connection with any remodeling, refinishing, refurbishing, rehabilitation, alteration or repair of any public works project is less than $100,000.

c. As per C.G.S. Sec. 31-53c, any business organizations, also known as the Applicant that receives DECD financial assistance totaling one million dollars or more, shall pay prevailing wages rates for any construction, remodeling, refinishing, refurbishing, rehabilitation, alteration or repair contracts entered into.

A business organization is considered any sole proprietorship, partnership, corporation, limited-liability-company, association, firm or other form of business or legal entity.

When prevailing wage requirements are triggered for business projects, general contractors, subcontractors, and/or construction managers will be required to submit monthly certified payroll records to the DECD Funding Recipient (for-profit or non-profit clients) that contain among other items, a signed statement from the employer that (a) the records are correct, (b) the employer met the prevailing wage law's requirements, and (c) the employer understands the penalties for knowingly filing false payroll records. The DECD Funding Recipient shall keep records satisfactory to DECD and hold DECD harmless in any disputes regarding Conn. Gen. Stat. Sec. 31-53c.

Please refer to http://www.ctdol.state.ct.us/wgwkstnd/prevailwage.htm for further guidance.

d. When Prevailing Wage Rates are required, the construction contract shall contain the following provision:

"The wages paid on an hourly basis to any person performing the work of any mechanic, laborer or worker on the work herein contracted to be done and the amount of payment or contribution paid or payable on behalf of each such person to any employee welfare fund, as defined in subsection (i) of section 31-53, shall be at a rate equal to the rate customary or prevailing for the same

work in the same trade or occupation in the town in which such construction, remodeling, refinishing, refurbishing, rehabilitation, alteration or repair project is being undertaken. Any contractor who is not obligated by agreement to make payment or contribution on behalf of such persons to any such employee welfare fund shall pay to each mechanic, laborer or worker as part of such person's wages the amount of payment or contribution for such person's classification on each pay day."

e. The State Department of Labor's Wage and Workplace Standards Division (860-754-5186 or at matthew.ferri@ct.gov) will assist in determining the prevailing wage rate.

f. Where federal funds are involved, Davis-Bacon Act rates may apply. Consult funding source.

9. CHRO REQUIREMENTS

a. The grantees and their contractors will need to comply with Sections 4a-60, 4-60a, 4a-60g, 46a-56, 46a-68b, 46a-68c, 46a-68d, 46a-68e and 46a-68f of the Connecticut General Statutes (C.G.S.) and Sections 46a-68j-21 through 43 of the Regulations of Connecticut State Agencies. The above statutes and regulations require the grantee to "aggressively solicit the participation of legitimate minority business enterprises as bidders, contractors, subcontractors and suppliers of materials." on projects. Consult your Project Manager for assistance.

b. All bidders must complete, sign, and return the "CHRO Contract Compliance Regulations Notification to Bidders" form to the grantee at the time of bid opening. Bids not including this form should be considered incomplete and rejected. This form is attached, and can also be found at: http://www.ct.gov/chro/lib/chro/pdf/notificationtobidders.pdf

c. For municipal public works contracts valued at over $50,000, state law requires the contractor, general contractor, or construction manager at risk to set a goal of twenty-five per cent (25%) of the state-funded portion of the contract for award to eligible subcontractors holding current small business enterprise (SBE) certification from the DAS under the provisions of C.G.S. 4a-60g. Of the portion of contracts set aside for SBE's, a goal of twenty-five percent (25%) (or 6.25% of the value of the entire contract funded by the state) must be set aside for awards to eligible contractors holding current minority business enterprise certification (i.e.: DAS certified Minority ("MBE"), Women ("WBE") and/or Disabled ("DisBE") owned businesses). The contractor, general contractor, construction manager at risk must make good faith efforts to employ minority business enterprises as subcontractors and suppliers of materials on such projects.

d. For any municipal public works projects receiving between $50,000 and $500,000 in state funding, an Affirmative Action Plan or Set Aside plan must be filed with the Commission on Human Rights and Opportunities (CHRO) *within 30 days following the contract award notice* (Note: Please contact the

Contract Compliance Unit at 860-541-4709 to determine which plan is required).

e. For any municipal public works projects receiving over $500,000.00 in state funding, regardless of the size of the contractor's workforce, an Affirmative Action Plan or Set Aside plan must be filed *within 30 days following the intent to award notice and must be approved by the CHRO prior to the award of the construction contract.* The municipality will need to contact CHRO if they choose to award the construction contract without an approved plan in place. The grantee will then need to retain 2% per month of the total contract value until the contractor has submitted an approved affirmative action plan to CHRO and CHRO has granted approval. (Note: Please contact the Contract Compliance Unit at 860 541-4709 to determine which plan is required).

f. Federal Financing (EDA, UD, CDBG, etc.) carries its own Minority/Women's contracting requirements. The DECD grantee must comply. The granting sources will provide instructions.

g. Please refer to pages 20-30 of this document which provide the grantee with the CHRO Contract Compliance Regulation Notification to Bidders Form, CHRO Bid Advertisement Language, Sample Municipal Checklist for CHRO Compliance, CHRO Notification of Contract Award, and Bidder Notification Letter Sample for Municipal Public Works Projects over $500,000.

10. DAS PREQUALIFICATION OF BIDDERS

a. Municipal contracts for the construction or renovation of a public works project, where the estimated value is $500,000 or greater, will need to comply with C.G.S. Sec. 4b-91. In such cases the contractors must be pre-qualified by the State of Connecticut Department of Administrative Services (DAS). When applicable, this requirement will need to be included in the Invitation to Bid as a prerequisite for selecting the Lowest Responsible and Qualified Bidder.

b. "Prequalification" means prequalification issued by DAS to bid on a contract or perform work pursuant to a contract for the construction, reconstruction, alteration, remodeling, repair or demolition of any public building or any other public work by the state or a municipality.

c. It is permissible to use AIA form A305, Contractor's Qualification
   i. Statement, as a prerequisite to bidding, provided prequalification
   ii. Does not prevent minority/women owned firms from bidding.
   iii. Consult your architect.

11. BID PACKAGE SUBMISSION REQUIREMENTS:

a. All construction plans, specifications, and instructions to bidders must be prepared by a licensed professional engineer or architect.

b. A draft bid package, including plans and specifications must be submitted to the Department of Economic and Community Development (DECD) for

review not less than two weeks prior to advertisement. The project design professional should submit a project cost estimate as part of the package.

c. Where applicable, CONNDOT Form 816 (Specifications for Roads, Bridges, and Incidental Construction) is a suitable substitute for construction and materials specifications.

d. The Bid Package must include the attached document "CHRO Contract Compliance Regulations Notification to Bidders" form.

e. The Bid Package should clearly state the terms and conditions for bidding the project including the submission of the "CHRO Contract Compliance Regulations Notification to Bidders" form. Bids not including this form should be considered incomplete and rejected.

12. BIDDING, CONTRACTING & CONSTRUCTION REQUIREMENTS FOR STATE PROGRAMS AT $250,000 OR LESS

a. Unless notified by DECD, for projects with a total project cost of $250,000 or less, the grantee will be required to certify that the project is in compliance with DECD design, bidding, contracting and construction monitoring requirements. Unless specifically waived by DECD, the grantee's design professional must have the proper professional credentials, i.e. professional engineer or registered architect. It will be the responsibility of the grantee to certify and submit the appropriate documentation during the pre-bid phase, construction phase and close-out phase of the project. The grantee will be required to provide the DECD with the following signed certification documents before the Assistance Agreement Contract between the DECD and the grantee is executed:

b. Construction Bid Package, Drawings, and Specifications Compliance Certification (page 30)

c. Construction Monitoring & Close-out Compliance Certification (page 31)

13. MATERIAL AND SERVICES

a. Many State Department of Administrative Services (DAS) service contracts are available to municipalities and 501(c) Non-Profits for use at the following site:

- http://www.biznet.ct.gov/SCP_Search/Default.aspx?AccLast=1

b. If this method is utilized, the DECD grantee must provide the DECD with the DAS Contract number and the latest pricing within the service contract demonstrating that they select the lowest priced contractor. If the lowest priced contractor is unavailable, then the next lowest priced contracted should be contacted.

c. In cases where the total estimated material cost is below $25,000, fax, email or letter solicitation for prices is acceptable. However, the DECD grantee must solicit at least three quotations for material.

d. Individual physical development contracts under $10,000 in value shall not be subject to competitive bid requirements.

14. ADVERTISING YOUR PROJECT

The DECD grantee is responsible for notifying the DECD of the Bid Opening date, time, and location as soon as it is determined.

In cases where the total project cost is below $100,000, bids may be solicited by letter, fax or email. However, the DECD grantee must solicit at least three quotations for such project.

Municipalities

a. Municipalities are required to post the Invitation to Bidders on the State Contracting Portal for a minimum of 5 business days. The DAS Contracting Portal, where municipalities can post an Invitation to Bidders, is located at http://das.ct.gov/Portal

b. Municipalities can also run a notice in the Public Notices section of one newspaper with broad circulation such as the Hartford Courant, Waterbury Republican, Bridgeport Post, New Haven Register, Norwich Bulletin, The News-Times or the Stamford Advocate. This notice must run for at least two (2) days.

c. For Municipal Public Works Contracts, please refer to page 21 regarding the CHRO set-aside requirements bid notice language that must be included in the bid notice (DAS Contracting Portal and Print Media).

d. The Invitation to Bidders must end with the following statement:

> "An Affirmative Action/Equal Opportunity Employer. Minority/Women's Business Enterprises are encouraged to apply. This contract is subject to state set-aside and contract compliance requirements."

Private Non-Profit Projects

a. 501(c) Non-Profits are required to run a notice in the Public Notices section of one newspaper with broad circulation such as the Hartford Courant, Waterbury Republican, Bridgeport Post, New Haven Register, Norwich Bulletin, or the Stamford Advocate. This notice must run for at least two (2) days. The ad must end with the following statement:

> "An Affirmative Action/Equal Opportunity Employer. Minority/Women's Business Enterprises are encouraged to apply."

b. DECD recommends but does not require the applicant also run a notice in the Public Notices section of a local newspaper. Trade media may also be used for placing project notices. Examples of such media are below.

c. F.W. Dodge Reports (1-800-393-6343); or www.dodge.construction.com

d. New England Construction News/CDC News (888-281-5593), or www.cdcnews.com
e. The Blue Book www.thebluebook.com

15. BONDS/CERTIFIED CHECKS

a. DECD Grantees must require bid bonds (5% minimum) for contracts exceeding $50,000 or subcontracts exceeding $50,000 (C.G.S. 49-41).

b. DECD Grantees must require a Performance Bond for contracts exceeding $25,000 or a subcontract exceeding $50,000 (C.G.S. 49-41).

c. DECD Grantees must require a Labor & Material Payment Bond for contracts exceeding $100,000.

d. If a construction manager is employed, each subcontract exceeding $100,000 shall be bonded or a certified check required.

16. LIQUADATED DAMAGES

a. For Major Construction/Renovation Projects, the DECD Grantee shall provide an anticipated construction duration period (# of days) within the project manual that will be used in the bid package.

b. As a prerequisite to executing a construction contract with the "Lowest Responsible and Qualified Bidder", the Contractor shall agree on the substantial completion date in accordance with the plans, project manual, and other contract documents, taking into consideration average weather conditions, availability of labor delivery of materials and equipment.

c. If the Contractor neglects, fails or refuses to achieve substantial completion of work by the substantial completion date in the executed construction contract, and such delay is not otherwise excused under this contract, then the Contractor shall agree to pay the Owner a liquidated damage for breach of contract for each and every calendar day that the Contractor shall be in default of the project work.

d. Damages due to Contractor's delay are difficult to determine and accurately specify so the Owner shall determine the most accurate amount of liquated damages for the project subject to DECD concurrence prior to bidding.

17. INSURANCE

a. The project's Assistance Agreement between the DECD and the Grantee should be followed for insurance requirements.

b. Contractor's Certificate of Insurance shall be required. The grantee is responsible for insuring that the levels are adequate.

c. State of Connecticut shall be listed as additionally insured under the following coverages:

1. Commercial General Liability - $1M per occurrence
2. General Aggregate - $2M
3. Umbrella Liability – If it is provided to the grantee.

d. Builder's Risk Insurance, when applicable, should be obtained either through the general contractor or construction manager. A copy of the Builder's Risk Certificate should be provided to DECD with the State of Connecticut listed as A.T.I.M.A.

e. The "Hold Harmless" Indemnification endorsement of the insurance shall include the interest of the municipality and the State of Connecticut. The Contractor and Subcontractors and other interests shall be so named.

18. SELECTING THE GENERAL CONTRACTOR

a. Lowest Responsible and Qualified Bidder: As used in this section, "lowest responsible and qualified bidder" means the bidder whose bid is the lowest of those bidders possessing the skill, ability and integrity necessary to faithfully perform the work. Should the grantee reject the lowest bidder as not responsible and/or not qualified, the grantee shall immediately notify DECD of the reasons for the rejection and request DECD concurrence. The Commissioner of DECD shall at his/her discretion either approve or deny the grantee's rejection. The grantee agrees to hold DECD harmless from any and all claims by rejected bidders.

b. Competitive Bidding - Contracts greater than $100,000 for DECD–sponsored projects: The grantee will give full opportunity for free, open and competitive bidding for each contract calling for installation, construction, reconstruction, demolition, removal, site improvement work or other similar work. The grantee will ensure the advertisement or call for bids for each such contract and will provide adequate competition. The award of such contract, when made, will be made by the grantee as soon as practicable to the lowest responsible and qualified bidder.

c. In the event that the grantee does not believe the lowest bidder, as defined in "a" above, to be responsible and qualified, the grantee will notify DECD requesting their concurrence in its choice before executing the general contract. In the event that there are less than three bidders, the grantee shall inform the department and request instructions.

d. The applicant must notify DECD before the contract is executed.

19. DOCUMENTS TO BE FORWARDED TO DECD AT COMPLETION OF BIDDING:

a. Completed bid tabulation and a complete copy of the three lowest responsive bids.

b. Signed and completed copies of the "CHRO Contract Compliance Regulations Notification to Bidders" form from the three lowest responsive bids.

c. Copies of the bid bonds/certified checks from the three lowest responsive bidders.

d. A copy of advertisements via the DAS Contracting Portal or Public Notice soliciting bids and/or publisher's affidavit from newspapers.

e. A final copy of bid addendums (if any).

f. Project design professional's letter of recommendation and grantee's letter of award for acceptance of the lowest responsible bidder.

20. DOCUMENTS TO BE FORWARDED TO DECD ONCE THE GENERAL CONTRACT HAS BEEN EXECUTED

a. One copy of executed contract and grantee's authority to execute (Board Resolution, etc.)

b. Notice to Proceed

c. Copy of Performance Bond, Labor and Material Payment Bond, and Power of Attorney for Surety (unless under $100,000).

d. Certificate of Insurance from general contractor covering liability and workers' compensation and builder's risk.

21. CONTRACTOR PAYMENT APPLICATIONS, RETAINAGE, AND CHANGE ORDERS

a. Change Orders: DECD does not approve or disapprove change orders. The department reserves the right to review each change order, and advise the grantee as to its appropriateness. If the change order is within the scope of the work approved by the Bond Commission, and funding is available (DECD will not request additional funds) the grantee may approve change orders. DECD reserves the right to determine the state funding eligibility of each change order. The contractor must contact CHRO to determine if additional reporting to CHRO is required in connection with the change orders (e.g.: if there is a change in subcontractor(s), if there is an increase or decrease to the contract value).

b. Vendor Payments: DECD does not approve or disapprove payments to Contractors. Copies of each approved Payment Application shall be sent to the department.

c. Retainage: No construction contract may provide for any retainage in an amount that exceeds five percent (5%) of the estimated amount of a progress payment for the life of the construction project. If the contractor has provided Contractor's Affidavit of Release of Liens (AIA form G706A) and lien waivers from major subcontractors and suppliers, a contractor may request the balance of retainage. If these documents are not provided, retainage

cannot be paid until 91 days after the date on the Certificate of Substantial Completion.

22. <u>THE FOLLOWING DOCUMENTS SHALL BE SUBMITTED TO THE DECD CONSTRUCTION SPECIALIST DURING THE CONSTRUCTION PHASE OF THE PROJECT:</u>

1. Copy of the contractor's approved schedule of values.

2. Copy of the contractor's construction schedule. Any adjustments to the schedule throughout construction must be submitted to DECD.

3. Approved monthly requisitions. Back up materials may be requested.

4. Job meeting minutes.

5. Approved change orders. Back up materials may be requested.

6. Copies of correspondence between Owner, Architect and/or Contractor.

23. <u>THE FOLLOWING DOCUMENTS SHALL BE SUBMITTED TO THE DECD CONSTRUCTION SPECIALIST OR THE PROJECT MANAGER AT THE COMPLETION OF THE PROJECT:</u>

1. Certificate of occupancy (where applicable)

2. Record documents (As Built Drawings in PDF Format)

3. Certificate of Substantial Completion (AIA form G704)

4. Contractor's Affidavit of Payment of Debts and Claims (AIA form G706)

5. Contractor's Affidavit of Release of Liens (AIA form G706A)

6. Subcontractors and Suppliers Release or Waiver of Liens.

7. Consent of Surety Company to Final Payment (AIA G707)

8. All of the Contractor's Application and Certificate for Payments (AIA form G702, and continuation sheet G703).

9. Proof of completion of remediation (where applicable, and decided by PM and Environmental Analyst)
    - DEEP Verification Report;
    - Environmental Land Use Restriction (ELUR);
    - DEEP Audit; and/or
    - Other documentation approved by DEEP.

24. CONSTRUCTION MONITORING PROCEDURES

Construction Monitoring covers the development phases of projects from pre-bid activities through construction contract administration to final construction closeout. Functions include oversight of bidding, bid tabulation and recommendation of the lowest responsible bidder, coordination with pre and post bid meetings, review of construction contract documents, review of payment requisitions, change orders, shop drawings as well as construction inspection.

The DECD Construction Specialist is the department's technical support regarding the management and administration of construction projects funded by the State of Connecticut. It will be the responsibility of the grantee to submit the documents listed below, when applicable, to DECD. Electronic submissions are preferred. In addition to electronic submissions, hard copies of certain documents may also be requested.

DECD will determine the extent of state monitoring, oversight and technical assistance for sponsored projects based on factors including estimated total project cost, project complexity and capacity of the applicant. DECD will notify the applicant of monitory requirements prior to the closing of the state assistance agreement.

Unless notified by DECD, for projects with a total project cost of $250,000 or less, the grantee will be required to certify that the project is in compliance with DECD design, bidding, contracting and construction monitoring requirements. Unless specifically waived by DECD, the grantee's design professional must have the proper professional credentials, i.e. professional engineer or registered architect. It will be the responsibility of the grantee to certify and submit the appropriate documentation during the pre-bid phase, construction phase and close-out phase of the project. The grantee will be required to provide the DECD with the following signed certification documents once the bid package has been prepared and once the construction contract has been executed:

1. Construction Bid Package, Drawings, and Specifications Compliance Certification (page 31)

2. Construction Monitoring & Close-out Compliance Certification (page 32)

25. Construction Oversight and Technical Assistance:

Construction monitoring by OCP Construction Specialists, applicable to all programs, includes:

- Provide technical assistance involving various projects and programs with other offices within DECD.
- Work with Local, State and/or Federal officials during the development phase of a project.
- Conduct site investigations for feasibility of development.
- Review budgets and cost estimates as they relate to construction costs.
- Review plans and specifications for conformance to Agency requirements prior to bidding.
- Assist Developer/Sponsor during the bidding period.
- Review bid documents, bid advertisements, bid instructions and bidding requirements
- Attend and oversee pre-bid inspections, bid openings, construction contract briefings, and construction contract execution meetings.
- Review construction bids, bid bonds, and contractor selection.
- Compliance review of executed construction contract documents received; review contracts, bonds, schedule of values and insurance certificates between Sponsor and General Contractor
- Construction Oversight and Technical Assistance: Monitor progress of work during construction for compliance with agency, state & federal requirements and procedures, (labor and safety standards, wage standards, etc.)
- Conduct periodic inspections of the project construction activities.
- Review the following: construction meeting minutes, proposal requests, change orders; costs, review requisitions and construction periodical payments for work completed; architect's supplemental instructions and directives; and correspondence.
- Review and process payment applications for disbursement of state funds.
- Review materials and products being used in the construction.
- Participate in the final inspection of the construction contract to ensure that the completed work is satisfactory. Review construction contract certificate of completion.
- Review construction closeout procedures with sponsor prior to acceptance of a project.
- Review construction closeout documentation prior to acceptance of a project, including certificates of occupancy and record documents. Certificates of substantial completion, affidavits of payments of debts, releases of liens, lien waivers, final applications and certificates for payment must also be reviewed.

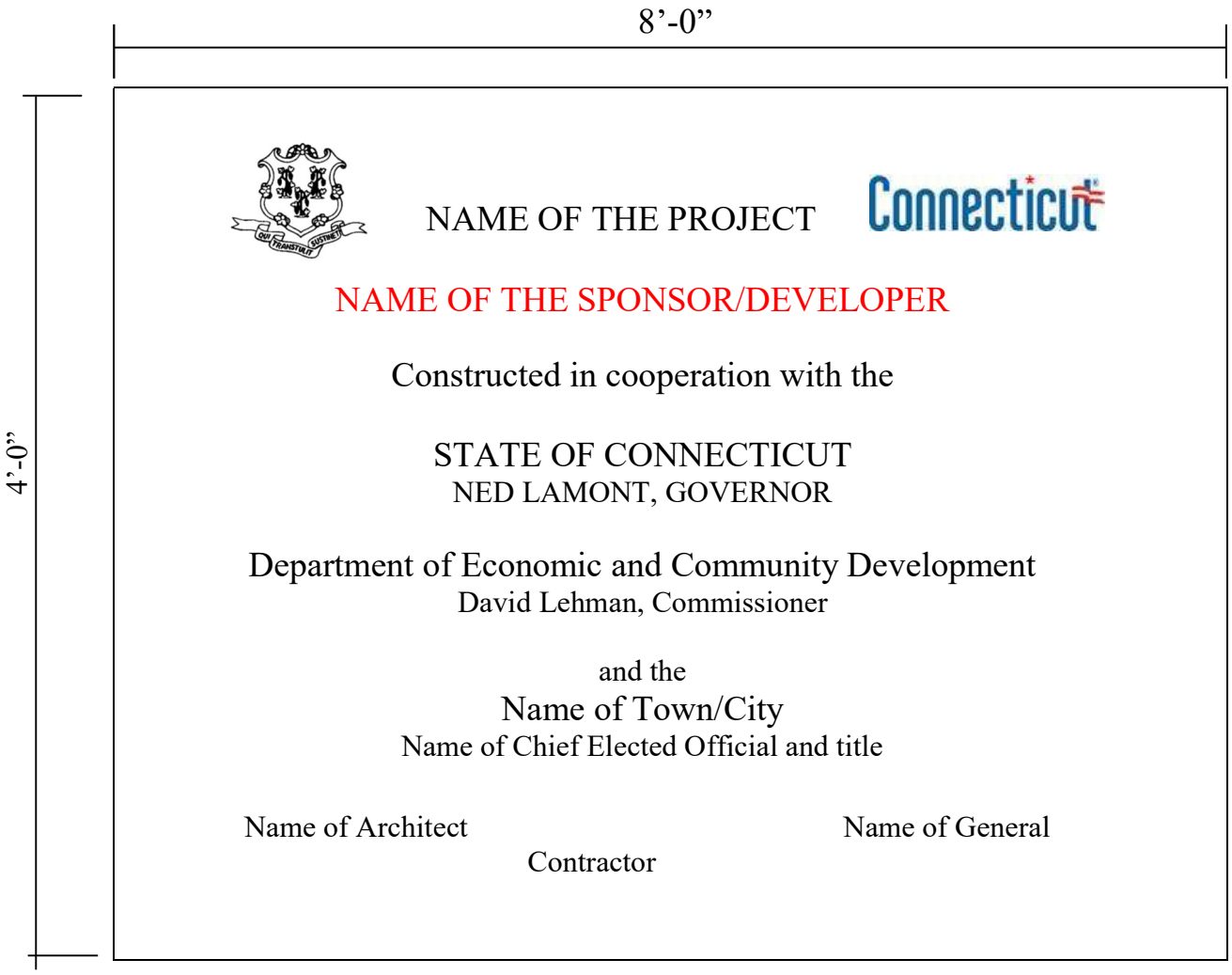
26. ATTACHMENTS

a. State Seal, DECD Logo, and State Sign Template (pages 19-20)

b. CHRO Contract Compliance Regulations Notification to Bidders Form & CHRO Bid Language. (pages 21-31)

c. Construction Compliance Certification Forms (pages 32-33)

DEPARTMENT OF ECONOMIC & COMMUNITY DEVELOPMENT
PROJECT SIGN



SIGN PANEL: ¾" MDO-EXT-APA PLYWOOD SUPPORTED WITH (2) 4X4 TREATED WOOD COLUMNS AND SECURED 4' INTO GRADE. TOP OF SIGN AT 8'-0" ABOVE GRADE.

COLORS: ALL LETTERS AND SYMBOLS ARE TO BE ROYAL BLUE. THE BACKGROUND WILL BE WHITE ENAMEL. BACK OF PLYWOOD AND SUPPORT STRUCTURE SHALL BE PAINTED MATTE BLACK.

TYPEFACE: HELVETICA MEDIUM

LOCATION: SIGN MUST BE LOCATED TO BE CLEARLY VISIBLE TO THE PUBLIC.

TIMING: INSTALL AT THE START OF CONSTRUCTION AND REMOVE AT CONSTRUCTION COMPLETION.

STATE SEAL & DECD LOGO: ATTACHED

STATE SEAL

DECD LOGO

COMMISSION ON HUMAN RIGHTS AND OPPORTUNITIES
CONTRACT COMPLIANCE REGULATIONS
NOTIFICATION TO BIDDERS
(Revised 09/17/07)

The contract to be awarded is subject to contract compliance requirements mandated by Sections 4a-60 and 4a-60a of the Connecticut General Statutes; and, when the awarding agency is the State, Sections 46a-71(d) and 46a-81i(d) of the Connecticut General Statutes. There are Contract Compliance Regulations codified at Section 46a-68j-21 through 43 of the Regulations of Connecticut State Agencies, which establish a procedure for awarding all contracts covered by Sections 4a-60 and 46a-71(d) of the Connecticut General Statutes.

According to Section 46a-68j-30(9) of the Contract Compliance Regulations, every agency awarding a contract subject to the contract compliance requirements has an obligation to "aggressively solicit the participation of legitimate minority business enterprises as bidders, contractors, subcontractors and suppliers of materials." "Minority business enterprise" is defined in Section 4a-60 of the Connecticut General Statutes as a business wherein fifty-one percent or more of the capital stock, or assets belong to a person or persons: "(1) Who are active in daily affairs of the enterprise; (2) who have the power to direct the management and policies of the enterprise; and (3) who are members of a minority, as such term is defined in subsection (a) of Section 32-9n." "Minority" groups are defined in Section 32-9n of the Connecticut General Statutes as "(1) Black Americans . . . (2) Hispanic Americans . . . (3) persons who have origins in the Iberian Peninsula . . . (4)Women . . . (5) Asian Pacific Americans and Pacific Islanders; (6) American Indians . . ." An individual with a disability is also a minority business enterprise as provided by Section 4a-60g of the Connecticut General Statutes. The above definitions apply to the contract compliance requirements by virtue of Section 46a-68j-21(11) of the Contract Compliance Regulations.

The awarding agency will consider the following factors when reviewing the bidder's qualifications under the contract compliance requirements:

(a) the bidder's success in implementing an affirmative action plan;
(b) the bidder's success in developing an apprenticeship program complying with Sections 46a-68-1 to 46a-68-17 of the Administrative Regulations of Connecticut State Agencies, inclusive;
(c) the bidder's promise to develop and implement a successful affirmative action plan;
(d) the bidder's submission of employment statistics contained in the "Employment Information Form", indicating that the composition of its workforce is at or near parity when compared to the racial and sexual composition of the workforce in the relevant labor market area; and
(e) the bidder's promise to set aside a portion of the contract for legitimate minority business enterprises. See Section 46a-68j-30(10)(E) of the Contract Compliance Regulations.

INSTRUCTIONS AND OTHER INFORMATION

The following BIDDER CONTRACT COMPLIANCE MONITORING REPORT must be completed in full, signed, and submitted with the bid for this contract. The contract awarding agency and the Commission on Human Rights and Opportunities will use the information contained thereon to determine the bidders compliance to Sections 4a-60 and 4a-60a CONN. GEN. STAT., and Sections 46a-68j-23 of the Regulations of Connecticut State Agencies regarding equal employment opportunity, and the bidder's good faith efforts to include minority business enterprises as subcontractors and suppliers for the work of the contract.

1) Definition of Small Contractor

Section 4a-60g CONN. GEN. STAT. defines a small contractor as a company that has been doing business under the same management and control and has maintained its principal place of business in Connecticut for a one year period immediately prior to its application for certification under this section, had gross revenues not exceeding ten million dollars in the most recently completed fiscal year, and at least fifty-one percent of the ownership of which is held by a person or persons who are active in the daily affairs of the company, and have the power to direct the management and policies of the company, except that a nonprofit corporation shall be construed to be a small contractor if such nonprofit corporation meets the requirements of subparagraphs (A) and (B) of subdivision 4a-60g CONN. GEN. STAT.

2) Description of Job Categories (as used in Part IV Bidder Employment Information) (Page 2)

MANAGEMENT: Managers plan, organize, direct, and control the major functions of an organization through subordinates who are at the managerial or supervisory level. They make policy decisions and set objectives for the company or departments. They are not usually directly involved in production or providing services. Examples include top executives, public relations managers, managers of operations specialties (such as financial, human resources, or purchasing managers), and construction and engineering managers.

BUSINESS AND FINANCIAL OPERATIONS: These occupations include managers and professionals who work with the financial aspects of the business. These occupations include accountants and auditors, purchasing agents, management analysts, labor relations specialists, and budget, credit, and financial analysts.

MARKETING AND SALES: Occupations related to the act or process of buying and selling products and/or services such as sales engineer, retail sales workers and sales representatives including wholesale.

LEGAL OCCUPATIONS: In-House Counsel who is charged with providing legal advice and services in regards to legal issues that may arise during the course of standard business practices. This category also includes assistive legal occupations such as paralegals, legal assistants.

COMPUTER SPECIALISTS: Professionals responsible for the computer operations within a company are grouped in this category. Examples of job titles in this category include computer programmers, software engineers, database administrators, computer scientists, systems analysts, and computer support specialists

ARCHITECTURE AND ENGINEERING: Occupations related to architecture, surveying, engineering, and drafting are included in this category. Some of the job titles in this category include electrical and electronic engineers, surveyors, architects, drafters, mechanical engineers, materials engineers, mapping technicians, and civil engineers.

OFFICE AND ADMINISTRATIVE SUPPORT: All clerical-type work is included in this category. These jobs involve the preparing, transcribing, and preserving of written communications and records; collecting accounts; gathering and distributing information; operating office machines and electronic data processing equipment; and distributing mail. Job titles listed in this category include telephone operators, bill and account collectors, customer service representatives, dispatchers, secretaries and administrative assistants, computer operators and clerks (such as payroll, shipping, stock, mail and file).

BUILDING AND GROUNDS CLEANING AND MAINTENANCE: This category includes occupations involving landscaping, housekeeping, and janitorial services. Job titles found in this category include supervisors of landscaping or housekeeping, janitors, maids, grounds maintenance workers, and pest control workers.

CONSTRUCTION AND EXTRACTION: This category includes construction trades and related occupations. Job titles found in this category include boilermakers, masons (all types), carpenters, construction laborers, electricians, plumbers (and related trades), roofers, sheet metal workers, elevator installers, hazardous materials removal workers, paperhangers, and painters. Paving, surfacing, and tamping equipment operators; drywall and ceiling tile installers; and carpet, floor and tile installers and finishers are also included in this category. First line supervisors, foremen, and helpers in these trades are also grouped in this category..

INSTALLATION, MAINTENANCE AND REPAIR: Occupations involving the installation, maintenance, and repair of equipment are included in this group. Examples of job titles found here are heating, ac, and refrigeration mechanics and installers; telecommunication line installers and repairers; heavy vehicle and mobile equipment service technicians and mechanics; small engine mechanics; security and fire alarm systems installers; electric/electronic repair, industrial, utility and transportation equipment; millwrights; riggers; and manufactured building and mobile home installers. First line supervisors, foremen, and helpers for these jobs are also included in the category.

MATERIAL MOVING WORKERS: The job titles included in this group are Crane and tower operators; dredge, excavating, and lading machine operators; hoist and winch operators; industrial truck and tractor operators; cleaners of vehicles and equipment; laborers and freight, stock, and material movers, hand; machine feeders and offbearers; packers and packagers, hand; pumping station operators; refuse and recyclable material collectors; and miscellaneous material moving workers.

PRODUCTION WORKERS: The job titles included in this category are chemical production machine setters, operators and tenders; crushing/grinding workers; cutting workers; inspectors, testers sorters, samplers, weighers; precious stone/metal workers; painting workers; cementing/gluing machine operators and tenders; etchers/engravers; molders, shapers and casters except for metal and plastic; and production workers.

3) Definition of Racial and Ethnic Terms (as used in Part IV Bidder Employment Information) (Page 3)

White (not of Hispanic Origin)- All persons having origins in any of the original peoples of Europe, North Africa, or the Middle East. Black(not of Hispanic Origin)- All persons having origins in any of the Black racial groups of Africa. Hispanic- All persons of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race.	Asian or Pacific Islander- All persons having origins in any of the original peoples of the Far East, Southeast Asia, the Indian subcontinent, or the Pacific Islands. This area includes China, India, Japan, Korea, the Philippine Islands, and Samoa. American Indian or Alaskan Native- All persons having origins in any of the original peoples of North America, and who maintain cultural identification through tribal affiliation or community recognition.

BIDDER CONTRACT COMPLIANCE MONITORING REPORT

PART I - Bidder Information

Company Name Street Address City & State Chief Executive	Bidder Federal Employer Identification Number_____ Or Social Security Number_____
Major Business Activity (brief description)	Bidder Identification (response optional/definitions on page 1) -Bidder is a small contractor. Yes__ No__ -Bidder is a minority business enterprise Yes__ No__ (If yes, check ownership category) Black___ Hispanic___ Asian American___ American Indian/Alaskan Native___ Iberian Peninsula___ Individual(s) with a Physical Disability___ Female___ - Bidder is certified as above by State of CT Yes__ No__
Bidder Parent Company (If any)	
Other Locations in Ct. (If any)	

PART II - Bidder Nondiscrimination Policies and Procedures

1. Does your company have a written Affirmative Action/Equal Employment Opportunity statement posted on company bulletin boards? Yes__ No__	7. Do all of your company contracts and purchase orders contain non-discrimination statements as required by Sections 4a-60 & 4a-60a Conn. Gen. Stat.? Yes__ No__
2. Does your company have the state-mandated sexual harassment prevention in the workplace policy posted on company bulletin boards? Yes__ No__	8. Do you, upon request, provide reasonable accommodation to employees, or applicants for employment, who have physical or mental disability? Yes__ No__
3. Do you notify all recruitment sources in writing of your company's Affirmative Action/Equal Employment Opportunity employment policy? Yes__ No__	9. Does your company have a mandatory retirement age for all employees? Yes__ No__
4. Do your company advertisements contain a written statement that you are an Affirmative Action/Equal Opportunity Employer? Yes__ No__	10. If your company has 50 or more employees, have you provided at least two (2) hours of sexual harassment training to all of your supervisors? Yes__ No__ NA__
5. Do you notify the Ct. State Employment Service of all employment openings with your company? Yes__ No__	11. If your company has apprenticeship programs, do they meet the Affirmative Action/Equal Employment Opportunity requirements of the apprenticeship standards of the Ct. Dept. of Labor? Yes__ No__ NA__
6. Does your company have a collective bargaining agreement with workers? Yes__ No__ 6a. If yes, do the collective bargaining agreements contain non-discrim ination clauses covering all workers? Yes__ No__ 6b. Have you notified each union in writing of your commitments under the nondiscrimination requirements of contracts with the state of Ct? Yes__ No__	12. Does your company have a written affirmative action Plan? Yes__ No__ If no, please explain. 13. Is there a person in your company who is responsible for equal employment opportunity? Yes__ No__ If yes, give name and phone number. _____ _____

Part III - Bidder Subcontracting Practices (Page 4)

1. Will the work of this contract include subcontractors or suppliers? Yes__ No__

1a. If yes, please list all subcontractors and suppliers and report if they are a small contractor and/or a minority business enterprise. (defined on page 1 / use additional sheet if necessary)

1b. Will the work of this contract require additional subcontractors or suppliers other than those identified in 1a. above? Yes__ No__

PART IV - Bidder Employment Information Date:

JOB CATEGORY *	OVERALL TOTALS	WHITE (not of Hispanic origin)		BLACK (not of Hispanic origin)		HISPANIC		ASIAN or PACIFIC ISLANDER		AMERICAN INDIAN or ALASKAN NATIVE	
		Male	Female	Male	Female	Male	Female	Male	Female	male	female
Management											
Business & Financial Ops											
Marketing & Sales											
Legal Occupations											
Computer Specialists											
Architecture/Engineering											
Office & Admin Support											
Bldg/ Grounds Cleaning/Maintenance											
Construction & Extraction											
Installation , Maintenance & Repair											
Material Moving Workers											
Production Occupations											
TOTALS ABOVE											
Total One Year Ago											
FORMAL ON THE JOB TRAINEES (ENTER FIGURES FOR THE SAME CATEGORIES AS ARE SHOWN ABOVE)											
Apprentices											
Trainees											

*NOTE: JOB CATEGORIES CAN BE CHANGED OR ADDED TO (EX. SALES CAN BE ADDED OR REPLACE A CATEGORY NOT USED IN YOUR COMPANY)

PART V - Bidder Hiring and Recruitment Practices (Page 5)

1. Which of the following recruitment sources are used by you? (Check yes or no, and report percent used)				2. Check (X) any of the below listed requirements that you use as a hiring qualification (X)		3. Describe below any other practices or actions that you take which show that you hire, train, and promote employees without discrimination
SOURCE	YES	NO	% of applicants provided by source			
State Employment Service					Work Experience	
Private Employment Agencies					Ability to Speak or Write English	
Schools and Colleges					Written Tests	
Newspaper Advertisement					High School Diploma	
Walk Ins					College Degree	
Present Employees					Union Membership	
Labor Organizations					Personal Recommendation	
Minority/Community Organizations					Height or Weight	
Others (please identify)					Car Ownership	
					Arrest Record	
					Wage Garnishments	

Certification (Read this form and check your statements on it CAREFULLY before signing). I certify that the statements made by me on this BIDDER CONTRACT COMPLIANCE MONITORING REPORT are complete and true to the best of my knowledge and belief, and are made in good faith. I understand that if I knowingly make any misstatements of facts, I am subject to be declared in non-compliance with Section 4a-60, 4a-60a, and related sections of the CONN. GEN. STAT.

(Signature)	(Title)	(Date Signed)	(Telephone)

BID ADVERTISEMENT LANGUAGE (for DAS Contracting Portal Bid Notice)

This contract is subject to state contract compliance requirements, including non-discrimination statutes and set-aside requirements. State law requires a minimum of twenty-five (25%) percent of the state-funded portion of the contract be set aside for award to subcontractors holding current certification from the Connecticut Department of Administrative Services. The contractor must demonstrate good faith effort to meet the 25% set-aside goals.

BID NOTICE LANGUAGE (for print media)

This contract is subject to state set-aside and contract compliance requirements.

BID LANGUAGE (for bid documents)

The contractor who is selected to perform this State project must comply with CONN. GEN. STAT. §§ 4a-60, 4a-60a, 4a-60g, and 46a-68b through 46a-68f, inclusive, as amended by June 2015 Special Session Public Act 15-5.

State law requires a minimum of twenty-five (25%) percent of the state-funded portion of the contract for award to subcontractors holding current certification from the Connecticut Department of Administrative Services ("DAS") under the provisions of CONN. GEN. STAT. § 4a-60g. (25% of the work with DAS certified Small and Minority owned businesses and 25% of that work with DAS certified Minority, Women and/or Disabled owned businesses.) The contractor must demonstrate good faith effort to meet the 25% set-aside goals.

For municipal public works contracts and quasi-public agency projects, the contractor must file a written or electronic non-discrimination certification with the Commission on Human Rights and Opportunities. Forms can be found at:

http://www.ct.gov/opm/cwp/view.asp?a=2982&q=390928&opmNav_GID=1806

SAMPLE
MUNICIPAL CHECKLIST FOR CHRO CONTRACT COMPLIANCE

_____ POST THE BID NOTICE WITH CHRO LANGUAGE INCLUDED

_____ PRE-BID MEETING (IF APPLICABLE)

_____ PROVIDE BID DOCUMENTS WITH CHRO LANGUAGE INCLUDED
(Notification to Bidders/Contract Compliance Monitoring Report included)

_____ SCREEN BIDS
- _____ CONFIRM CONTRACTOR HAS NON-DISCRIMINATION CERTIFICATE/AFFIDAVIT INCLUDED WITH BID DOCUMENTS
- _____ CHECK WITH CT LAW JOURNAL TO ENSURE CONTRACTOR IS NOT DEBARRED

_____ SELECT BIDDER

_____ SEND NOTICE TO CHRO AND SELECTED BIDDER:
- _____ $50,000 TO $499,999 CONTACT AWARD NOTICE
- _____ $500,000 AND ABOVE INTENT TO AWARD CONTRACT NOTICE

_____ EXECUTE CONTRACT WITH CONTRACT COMPLIANCE AND SET-ASIDE LANGUAGE
- _____ $50,000 TO $499,999 WHEN AWARDED
- _____ $500,000 AND ABOVE ONLY WHEN:
  - _____ CONTRACTOR HAS SUBMITTED AN APPROVED AFFIRMATIVE ACTION PLAN TO CHRO
  - _____ REQUESTED APPROVAL FROM CHRO TO AWARD CONTRACT AND RETAIN 2% PER MONTH OF THE TOTAL CONTRACT VALUE UNTIL CONTRACTOR HAS SUBMITTED AN APPROVED AFFIRMATIVE ACTION PLAN TO CHRO AND CHRO HAS GRANTED APPROVAL.

_____ ENSURE A COPY OF A LETTER OF TRANSMITTAL FROM THE CONTRACTOR WAS RECEIVED CONFIRMING AN AFFIRMATIVE ACTION PLAN WAS FILED WITH CHRO

TO: Contract Compliance Unit
Commission on Human Rights and Opportunities
CHRO Form CC052

FROM: Click here to enter text.

DATE: Click here to enter a date.

SUBJECT: Notification of Contract Award

As required by Connecticut Contract Compliance Regulations Sec. 46a-68-31 this is to notify the Commission that the following contract has been awarded.

CONTRACT NUMBER: Click here to enter text.

PROJECT NAME: Click here to enter text.

PROJECT LOCATION: Click here to enter text.

DURATION OF CONTRACT: Click here to enter text.

DOLLAR VALUE OF CONTRACT: Click here to enter text.

SET-ASIDE VALUE: SBE Click here.% Click here.$

MBE Click here.% Click here.$

THIS IS A PUBLIC WORKS CONTRACT ☐
THIS IS NOT A PUBLIC WORKS CONTRACT ☐

CONTRACTOR INFORMATION

NAME OF CONTRACTOR: Click here to enter text.

MAIN OFFICE ADDRESS: Click here to enter text.
Click here to enter text.

TELEPHONE NUMBER: Click here to enter text.

NUMBER OF EMPLOYEES: Click here to enter text.
(If known)

SUBCONTRACTOR INFORMATION: Please list any subcontractors who were listed by the Contractor for this project:
Click here to enter text.

WERE THE FOLLOWING FACTORS CONSIDERED IN THE SELECTION OF THIS CONTRACTOR?

1. The bidder's success in implementing an affirmative action plan:
   ☐Yes ☐No ☐ Unknown

2. The bidder's success in developing an apprenticeship program complying with Sections 46a-68-1 to 46a-68-17, inclusive:
   ☐Yes ☐No ☐ Unknown

3. The bidder's promise to develop and implement a successful affirmative action plan:
   ☐Yes ☐No ☐ Unknown

4. The bidder's submission of EEO-1 data indicating that the composition of the workforce is at or near parity when compared to the racial and gender composition of the workforce in the relevant labor market area:
   ☐Yes ☐No ☐ Unknown

5. The bidder's promise to set aside a portion of the contract for legitimate minority business enterprises:
   ☐Yes ☐No ☐ Unknown

AGENCY CONTACT PERSON

NAME: Click here to enter text .

JOB TITLE: Click here to enter text .

ADDRESS: Click here to enter text .

TELEPHONE: Click here to enter text .

Bidder Notification Letter Sample
Municipal Public Works Projects over
$500,000

XYZ Company
Street address
city/state

RE: Project number and name
Project location
Contract award amount
SBE/MBE Set-Aside Requirement (choose one of three options)

(Choose the provision that applies to the award, and delete the remaining two boxes)

25% for SBE contractors of which 25% (or 6.25% of project total) for SMBE contractors	6.25% for SMBE contractors	Contractor must document good faith effort to include MBE contractors

Attn: company official

Date:

Subject: Affirmative Action Plan Requirements

Dear

Your company has been identified as the bidder of choice for the above referenced project. The work for this project falls under the provisions of CONN. GEN. STAT. Sections 46a-68c and 46a-68d which requires that prior to the award of this contract by this agency, you must have your company affirmative action plan approved by the Commission on Human Rights and Opportunities. Enclosed for your convenience is the suggested format for an affirmative action plan to assist in the preparation of your company plan. Should you have any questions regarding the preparation of your plan, you may contact the Contract Compliance Unit at the Commission on Human Rights and Opportunities at (860) 541-4709.

A copy of your plan must be submitted to the Commission on Human Rights and Opportunities within 30 days of your receipt of this letter. The Commission will review your affirmative action plan as required by Sections 46a68j-25 through 29 of the Administrative Regulations of Connecticut State Agencies within 60 days of submission. When the plan is approved, the

Commission will notify you and this agency so the contract can be awarded. Please send your affirmative action plan to:

Commission on Human Rights and Opportunities 25
Sigourney Street Hartford, CT 06106 Attn: Contract
Compliance Unit

Optional: You are also instructed to send a copy of the letter transmitting your plan to the Commission on Human Rights and Opportunities to:

Contract Awarding Agency Name
(address etc.)

If you have any other questions concerning this matter, please contact the undersigned at (860) (phone #)

Sincerely,

Agency official

copy: Contract Compliance Unit, CHRO

C:aapnotltr

BIDDING, CONTRACTING & CONSTRUCTION REQUIREMENTS FOR STATE PROGRAMS AT $250,000 OR LESS

CONSTRUCTION BID PACKAGE, DRAWINGS AND SPECIFICATIONS
COMPLIANCE CERTIFICATION

GRANTEE: _____

PROJECT NAME AND MUNICIPALITY: _____

_____

I,_____, as the responsible grantee do hereby certify that the construction documents (Bid Package, Drawings & Specifications) shall be completed by a licensed professional engineer or architect for the above project and certify the following:

1. A complete copy of the Bid Package and Invitation to Bid shall be submitted to or reviewed by the Department of Economic & Community Development (DECD).

2. The Drawings and or Specifications for the above Project shall cover the scope of work, as indentified in the DECD Financial Assistance Proposal.

3. The DECD Bidding, Contracting and Construction Guidelines for State Programs have been thoroughly reviewed by the grantee and/or qualified design professional.

4. The Bid Package shall be technically correct and complete and shall clearly show that all of the DECD terms and conditions for bidding the project shall be met.

Signed_____

Title: _____

Address_____

Telephone_____Date_____

CONSTRUCTION CONTRACT AND MONITORING
COMPLIANCE CERTIFICATION

GRANTEE: _____

PROJECT NAME AND MUNICIPALITY: _____

_____

I, _____, and as the responsible grantee do hereby certify that the bid results shall be reviewed by a licensed professional engineer or architect for the above project and certify the following:

1. The qualified design professional shall assess and tabulate all of the bids and shall make a recommendation to award the bid to the lowest responsible bidder whose bid shall be the lowest of those bidders possessing the skill, ability and integrity necessary to faithfully perform the work.

2. The required bid result documentation shall be submitted to DECD at the completion of bidding before the grantee moves forward with executing the construction contract.

3. The lowest responsible bidders executed contract, grantee's authority to execute, and all other documentation required by the DECD once the general contract is executed shall be forwarded to the DECD before construction commences.

4. It shall be the responsibility of the grantee to provide construction oversight and inspection on the project by following all of the procedures and submitting all of the documentation indicated in the Construction Monitoring Procedures.

Signed_____

Title: _____

Address_____

Telephone_____Date_____

Attachment F