

April 3, 2025

Tim Pearson  
Conservation Agent  
Littleton Conservation Commission  
37 Shattuck Street  
P.O. Box 1305  
Littleton, MA 01460

RE: Request for Minor Project Modifications for DEP#204-0991, The Reconstruction of Foster Street in Littleton, MA.

Dear Mr. Pearson:

This is a request for minor project modifications for the subject project. Two modifications to the project plans have materialized as follows:

1. Additional work is proposed to manage and treat invasive plants within the project work limits. It is requested that the treatment of invasive plants in the project area be allowed by the Commission as a minor project modification. The work is proposed to be performed in concurrence with the standards of MassDOT's landscaping section who have recommended the treatment. This work was not previously proposed in the NOI nor was it required as mitigation by the OOC.

The contractor has already mapped and inventoried invasive plants within the work limits per the requirements of the original project. The proposed additional work would include mechanical extraction and selective application of herbicidal treatment to manage identified invasive plants in the project work limits. A written scope of work is enclosed from SWCA, the subcontractor who would perform the work. The scope includes plan markups showing the proposed location of treatment. No treatment would occur within wetland boundaries.

2. The project originally included 5 underground leaching cement concrete catch basin structures, 4' x 6.5' in size, located along the back of curb on Foster Street connected to proposed traditional deep sump catch basins. Three of the leaching catch basins were located within the Conservation Commission's jurisdictional area.

As a redevelopment and limited project, it was demonstrated that the project met the Stormwater Standards to the maximum extent practicable. It was noted by the proponent in response to the Commission's comments on the NOI dated 12/01/2023 that the leaching catch basins were not capable of managing high flow events and had low value mitigating stormwater flows during design storms. The purpose of the leaching catch basins was to provide some additional stormwater recharge in the project limits to the maximum extent practicable.

Groundwater elevation must be 8.5' below the ground surface for installation of the proposed leaching catch basins. Groundwater test pits performed during construction have shown evidence of higher seasonal groundwater elevation than recommended for leaching catch basin installation at the original proposed 5 locations.

A plan markup is enclosed showing the locations where the original 5 leaching catch basins were found to be infeasible and one new location where installation of a leaching catch basin was found to be feasible. It is requested that the change in proposed leaching catch basins be allowed as a minor project modification in light of the higher than expected seasonal groundwater and the proposal to install at least one leaching catch basin for stormwater recharge to the maximum extent practicable.

Sincerely,

A handwritten signature in black ink that reads "Aaron Keegan". The signature is written in a cursive, flowing style.

Aaron Keegan, PE  
Project Engineer  
Fuss & O'Neill, Inc.  
(413) 333-5461  
[aaron.keegan@fando.com](mailto:aaron.keegan@fando.com)

CC: Stephen Jahnle, DPW Director, Town of Littleton; Chris Deloge, Resident Engineer, MassDOT

Enclosed:

- 1). Invasive Plant Management Strategy Document by SWCA including a plan markup of proposed work
- 2). Utility plan markup showing revised location of leaching catch basins and groundwater elevation results.

ATTACHMENT 1

INVASIVE PLANT MANAGEMENT STRATEGY SCOPE OF WORK  
(PROVIDED UNDER SEPARATE COVER DUE TO FILE SIZE)

ATTACHMENT 2

PLAN MARKUP SHOWING PROPOSED CHANGES TO LEACHING CATCH  
BASINS



GENERAL NOTES:

- IF EXISTING PIPES SHOWN TO BE REMOVED ARE WITHIN THE LIMITS OF NEW PIPE TRENCH EXCAVATION, THEN THE REMOVAL COST OF THE OLD PIPES SHALL BE INCLUDED IN THE UNIT COST FOR THE NEW PIPE THAT IS BEING INSTALLED. IF PIPES SHOWN TO BE REMOVED ARE OUTSIDE THE LIMITS OF NEW PIPE TRENCH (AS DETERMINED BY THE ENGINEER), THEN REMOVAL COST SHALL BE PAID UNDER ITEM 141. CLASS A TRENCH EXCAVATION.
- ALL PROPOSED (NEW) CATCH BASINS SHALL HAVE 4' SUMPS.
- ALL CATCH BASINS WITHIN THE PAVED ROADWAY SHALL HAVE CASCADE STYLE/BICYCLE SAFE GRATES UNLESS OTHERWISE NOTED ON THE PLANS.
- ALL ELEVATIONS, STATIONS, AND OFFSETS FOR ALL CATCH BASINS AND DRAINAGE MANHOLES COME FROM CENTER OF COVER OR GRATE.
- CONTRACTOR SHALL USE APPROPRIATELY SIZED RCP TO MATCH INTO EXISTING PIPES AS SHOWN.

TEST PIT NOTES:

- ALL TEST PITS RELATED TO THE PROPOSED DRAINAGE SYSTEM INSTALLATIONS SHALL BE COMPLETED BY THE CONTRACTOR BEFORE DRAINAGE STRUCTURES ARE ORDERED.

ELECTRICAL NOTES:

- CONTRACTOR SHALL COORDINATE WITH LITTLETON LIGHT AND ELECTRIC DEPT. (LELD) ON THE TIMING OF TRANSFER FOR PRIMARY RISER AT UTILITY POLES #78, #99, #104, AND #105. DISRUPTION TO COMMERCIAL PROPERTIES SHALL BE MINIMIZED BY WEEKEND WORK OR THE USE OF GENERATORS.

TREE TRIMMING NOTES:

- LIMITS OF SELECTIVE CLEARING AND THINNING SHALL BE 10FT OFFSET BACK FROM ANY RESET OHW OR AS SHOWN ON CONSTRUCTION PLANS.

GAS NOTES:

- NOTIFY NATIONAL GRID DAMAGE PREVENTION, MEGHAN KELLEY, AT(339) 203-0490 TWO WEEKS PRIOR TO EXCAVATING NEAR REGULATOR STATION OR GAS MAIN. HIGH PRESSURE GAS MAINS ARE PRESENT IN PROJECT AREA.
- TO REPORT ANY DAMAGE TO A GAS LINE CALL NATIONAL GRID'S EMERGENCY GAS LEAKS NUMBER AT 1-800-233-5325 IMMEDIATELY.
- ALL TEST PITS PERFORMED NEAR GAS MAIN SHALL BE PERFORMED WITH A VACUUM TRUCK SEE SPECIAL PROVISION FOR ITEM 141.101

LITTLETON  
RECONSTRUCTION OF FOSTER STREET

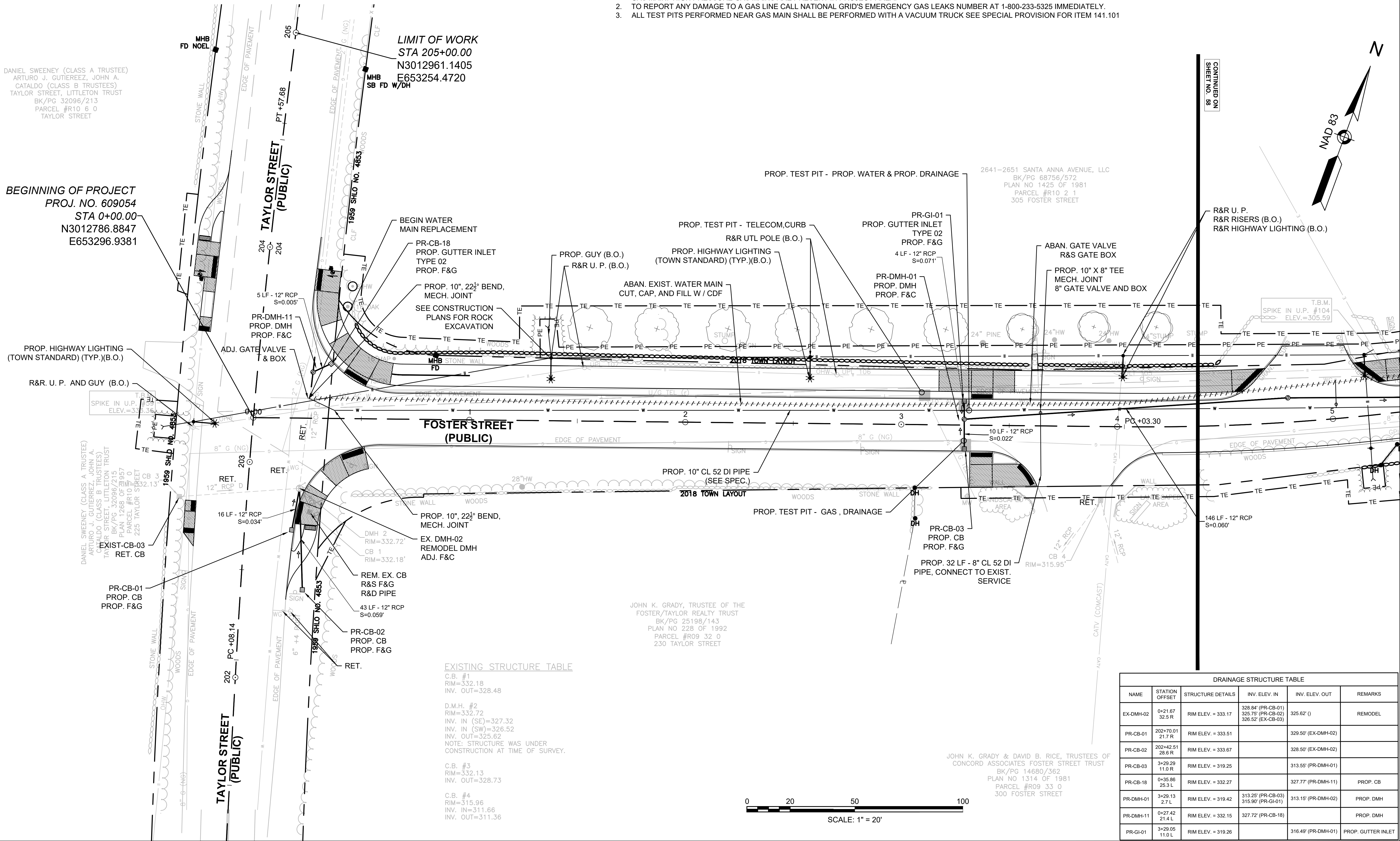
| STATE            | FED. AID PROJ. NO.     | SHEET NO. | TOTAL SHEETS |
|------------------|------------------------|-----------|--------------|
| MA               | STP/CMQ/TAP-0033(037)X | 57        | 128          |
| PROJECT FILE NO. |                        | 609054    |              |

DRAINAGE & UTILITY PLANS

DANIEL SWEENEY (CLASS A TRUSTEE)  
ARTURO J. GUTIERREZ, JOHN A.  
CATALDO (CLASS B TRUSTEES)  
TAYLOR STREET, LITTLETON TRUST  
BK/PG 32096/213  
PARCEL #R10 6 0  
TAYLOR STREET

BEGINNING OF PROJECT  
PROJ. NO. 609054  
STA 0+00.00  
N3012786.8847  
E653296.9381

LIMIT OF WORK  
STA 205+00.00  
N3012961.1405  
E653254.4720



EXISTING STRUCTURE TABLE

|                                                                                                                                                          |
|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| C.B. #1<br>RIM=332.18<br>INV. OUT=328.48                                                                                                                 |
| D.M.H. #2<br>RIM=332.72<br>INV. IN (SE)=327.32<br>INV. IN (SW)=326.52<br>INV. OUT=325.62<br>NOTE: STRUCTURE WAS UNDER<br>CONSTRUCTION AT TIME OF SURVEY. |
| C.B. #3<br>RIM=332.13<br>INV. OUT=328.73                                                                                                                 |
| C.B. #4<br>RIM=315.96<br>INV. IN=311.66<br>INV. OUT=311.36                                                                                               |

| DRAINAGE STRUCTURE TABLE |                     |                    |                                                                |                     |                    |
|--------------------------|---------------------|--------------------|----------------------------------------------------------------|---------------------|--------------------|
| NAME                     | STATION<br>OFFSET   | STRUCTURE DETAILS  | INV. ELEV. IN                                                  | INV. ELEV. OUT      | REMARKS            |
| EX-DMH-02                | 0+21.67<br>32.5 R   | RIM ELEV. = 333.17 | 328.84' (PR-CB-01)<br>325.75' (PR-CB-02)<br>326.52' (EX-CB-03) | 325.62' (I)         | REMODEL            |
| PR-CB-01                 | 202+70.01<br>21.7 R | RIM ELEV. = 333.51 |                                                                | 329.50' (EX-DMH-02) |                    |
| PR-CB-02                 | 202+42.51<br>28.6 R | RIM ELEV. = 333.67 |                                                                | 328.50' (EX-DMH-02) |                    |
| PR-CB-03                 | 3+29.29<br>11.0 R   | RIM ELEV. = 319.25 |                                                                | 313.55' (PR-DMH-01) |                    |
| PR-CB-18                 | 0+35.86<br>25.3 L   | RIM ELEV. = 332.27 |                                                                | 327.77' (PR-DMH-11) | PROP. CB           |
| PR-DMH-01                | 3+29.13<br>2.7 L    | RIM ELEV. = 319.42 | 313.25' (PR-CB-03)<br>315.90' (PR-GI-01)                       | 313.15' (PR-DMH-02) | PROP. DMH          |
| PR-DMH-11                | 0+27.42<br>21.4 L   | RIM ELEV. = 332.15 | 327.72' (PR-CB-18)                                             |                     | PROP. DMH          |
| PR-GI-01                 | 3+29.05<br>11.0 L   | RIM ELEV. = 319.26 |                                                                | 316.49' (PR-DMH-01) | PROP. GUTTER INLET |



NOTES:  
1. SEE SHEET 57 FOR GENERAL UTILITY, ELECTRICAL AND TREE TRIMMING NOTES  
2. \* - CONTRACTOR TO MATCH EXISTING PIPE INVERT. INVERT GIVEN IS APPROXIMATE

GAS NOTES:  
1. NOTIFY NATIONAL GRID DAMAGE PREVENTION, MEGHAN KELLEY, AT(339) 203-0490 TWO WEEKS PRIOR TO EXCAVATING NEAR REGULATOR STATION OR GAS MAIN. HIGH PRESSURE GAS MAINS ARE PRESENT IN PROJECT AREA.  
2. TO REPORT ANY DAMAGE TO A GAS LINE CALL NATIONAL GRID'S EMERGENCY GAS LEAKS NUMBER AT 1-800-233-5325 IMMEDIATELY.  
3. ALL TEST PITS PERFORMED NEAR GAS MAIN SHALL BE PERFORMED WITH A VACUUM TRUCK SEE SPECIAL PROVISION FOR ITEM 141.101

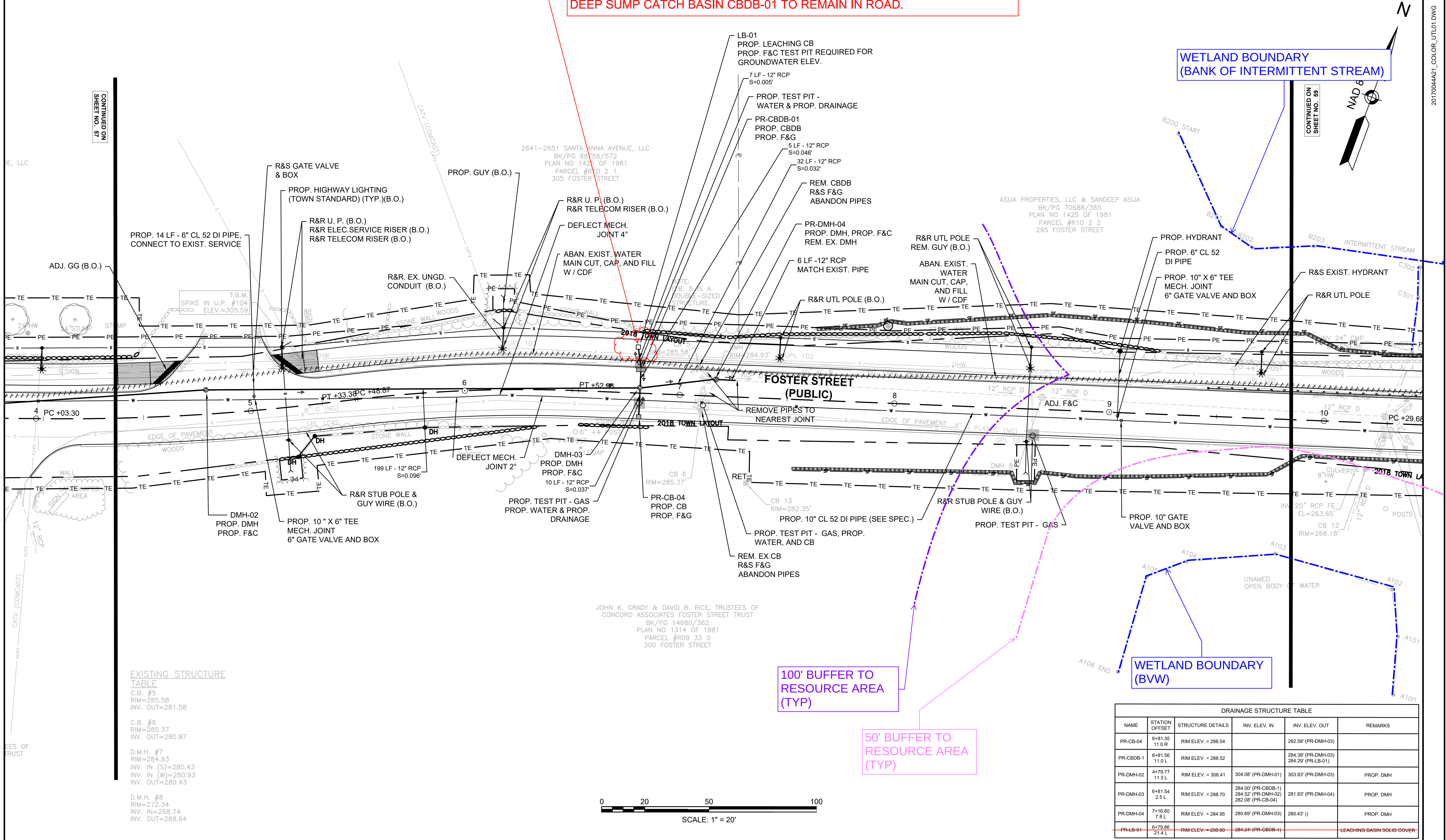
NOTE: GROUND WATER MUST BE 8.5' BELOW SURFACE FOR LEACHING CATCH BASIN INSTALLATION.

LOCATION OF LEACHING BASIN-01  
ESTIMATED SEASONAL HIGH GROUND WATER DEPTH 4.0' BELOW SURFACE  
LEACHING CATCH BASIN NOT FEASIBLE  
DEEP SUMP CATCH BASIN CBDB-01 TO REMAIN IN ROAD.

LITTLETON  
RECONSTRUCTION OF FOSTER STREET

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| MA               | STP/CMQ/TAP-0033(037)X | 58        | 128          |
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DRAINAGE & UTILITY PLANS



EXISTING STRUCTURE  
TABLE

C.B. #5  
RIM=285.58  
INV. OUT=281.58

C.B. #6  
RIM=285.37  
INV. OUT=280.87

D.M.H. #7  
RIM=284.93  
INV. IN (S)=280.43  
INV. IN (W)=280.93  
INV. OUT=280.43

D.M.H. #8  
RIM=272.34  
INV. IN=268.74  
INV. OUT=268.64

| DRAINAGE STRUCTURE TABLE |                   |                    |                                                                  |                                           |                            |
|--------------------------|-------------------|--------------------|------------------------------------------------------------------|-------------------------------------------|----------------------------|
| NAME                     | STATION<br>OFFSET | STRUCTURE DETAILS  | INV. ELEV. IN                                                    | INV. ELEV. OUT                            | REMARKS                    |
| PR-CB-04                 | 6+81.35<br>11.0 R | RIM ELEV. = 288.54 |                                                                  | 282.58' (PR-DMH-03)                       |                            |
| PR-CBDB-1                | 6+81.56<br>11.0 L | RIM ELEV. = 288.52 |                                                                  | 284.39' (PR-DMH-03)<br>284.29' (PR-LB-01) |                            |
| PR-DMH-02                | 4+79.77<br>11.3 L | RIM ELEV. = 308.41 | 304.08' (PR-DMH-01)                                              | 303.83' (PR-DMH-03)                       | PROP. DMH                  |
| PR-DMH-03                | 6+81.54<br>2.5 L  | RIM ELEV. = 288.70 | 284.00' (PR-CBDB-1)<br>284.52' (PR-DMH-02)<br>282.08' (PR-CB-04) | 281.83' (PR-DMH-04)                       | PROP. DMH                  |
| PR-DMH-04                | 7+16.80<br>7.8 L  | RIM ELEV. = 284.95 | 280.69' (PR-DMH-03)                                              | 280.43' ( )                               | PROP. DMH                  |
| PR-LB-01                 | 6+79.86<br>21.4 L | RIM ELEV. = 288.60 | 284.24' (PR-CBDB-1)                                              |                                           | LEACHING BASIN SOLID COVER |



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LITTLETON  
RECONSTRUCTION OF FOSTER STREET

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DRAINAGE & UTILITY PLANS

WETLAND BOUNDARY  
(BANK OF INTERMITTENT STREAM)

LOCATION OF LEACHING BASIN-02  
ESTIMATED SEASONAL HIGH GROUND WATER DEPTH 5.0' BELOW SURFACE  
LEACHING CATCH BASIN NOT FEASIBLE  
DEEP SUMP CATCH BASIN CB-06 TO REMAIN IN ROAD.

WETLAND BOUNDARY  
(BVW)

WETLAND BOUNDARY  
(BVW)

WETLAND BOUNDARY  
(BVW)

100' BUFFER TO RESOURCE AREA (TYP)

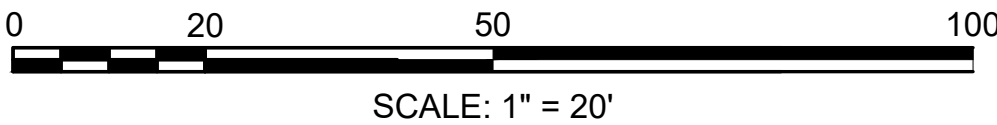
50' BUFFER TO  
RESOURCE AREA (TYP)

EXISTING STRUCTURE  
TABLE

|            |                           |
|------------|---------------------------|
| C.B. #9    | D.M.H. #9                 |
| RIM=265.69 | INV. IN (NE)=261.39       |
|            | INV. IN (SE)=261.29       |
|            | INV. IN (S)=260.19        |
|            | INV. IN (W)=261.29        |
|            | INV. OUT=260.19           |
| C.B. #10   | RIM=265.16                |
|            | INV. OUT=261.66           |
| C.B. #11   | RIM=265.34                |
|            | INV. OUT=261.34           |
| C.B. #12   | RIM=266.18                |
|            | INV. IN (S)=264.18        |
|            | INV. IN (W)=263.48        |
|            | INV. OUT=261.28           |
| C.B. #13   | RIM=282.35                |
|            | NOTE: FILLED WITH DEBRIS. |

|          |                 |
|----------|-----------------|
| C.B. #14 | RIM=254.44      |
|          | INV. OUT=250.94 |
| C.B. #15 | RIM=254.68      |
|          | INV. IN=250.98  |
|          | INV. OUT=251.28 |
| C.B. #16 | RIM=253.58      |
|          | INV. IN=250.98  |
|          | INV. OUT=250.38 |

| DRAINAGE STRUCTURE TABLE |                    |                    |                                          |                                           |                            |
|--------------------------|--------------------|--------------------|------------------------------------------|-------------------------------------------|----------------------------|
| NAME                     | STATION OFFSET     | STRUCTURE DETAILS  | INV. ELEV. IN                            | INV. ELEV. OUT                            | REMARKS                    |
| PR-CB-05                 | 13+99.37<br>11.0 R | RIM ELEV. = 255.31 |                                          | 250.85' (PR-DMH-05)                       |                            |
| PR-CB-06                 | 14+05.22<br>11.0 L | RIM ELEV. = 255.23 |                                          | 250.77' (PR-DMH-05)<br>250.67' (PR-LB-02) | PROP-CB                    |
| PR-DMH-05                | 14+11.89<br>6.8 L  | RIM ELEV. = 255.23 | 250.69' (PR-CB-06)<br>250.67' (PR-CB-05) | 250.57' (PR-FE-01)                        | PROP. DMH                  |
| PR-FE-01                 | 14+16.61<br>30.5 L | RIM ELEV. = 251.75 | 250.08' (PR-DMH-05)                      |                                           | FLARED END                 |
| PR-LB-02                 | 14+04.57<br>20.2 L | RIM ELEV. = 255.69 | 250.62' (PR-CB-06)                       |                                           | LEACHING BASIN SOLID COVER |





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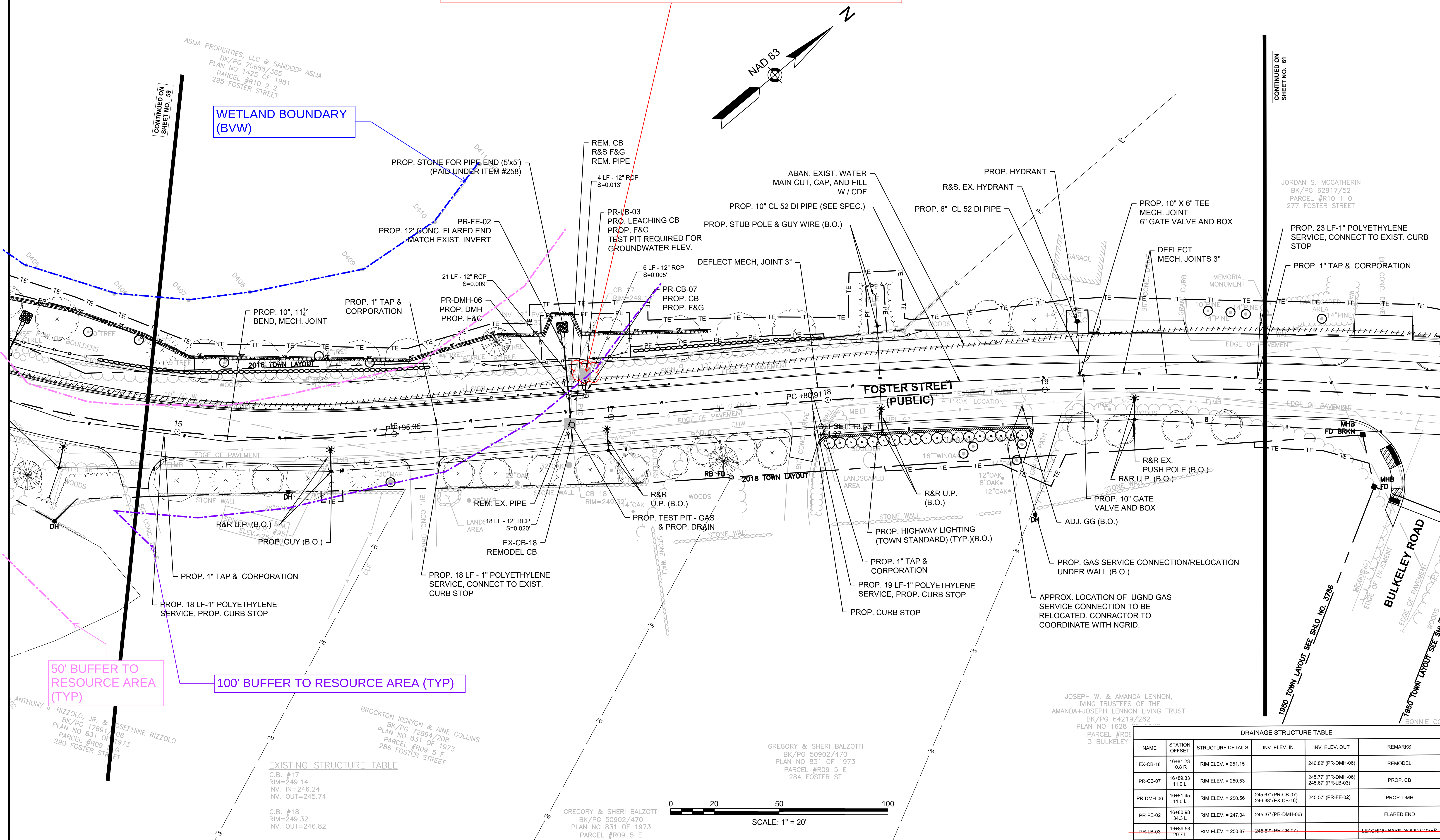
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LOCATION OF LEACHING BASIN-03  
ESTIMATED SEASONAL HIGH GROUND WATER DEPTH 3.2' BELOW SURFACE  
LEACHING CATCH BASIN NOT FEASIBLE  
DEEP SUMP CATCH BASIN CB-07 TO REMAIN IN ROAD.

LITTLETON  
RECONSTRUCTION OF FOSTER STREET

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DRAINAGE & UTILITY PLANS



| DRAINAGE STRUCTURE TABLE |                    |                    |                                          |                                           |                            |
|--------------------------|--------------------|--------------------|------------------------------------------|-------------------------------------------|----------------------------|
| NAME                     | STATION OFFSET     | STRUCTURE DETAILS  | INV. ELEV. IN                            | INV. ELEV. OUT                            | REMARKS                    |
| EX-CB-18                 | 16+81.23<br>10.8 R | RIM ELEV. = 251.15 |                                          | 246.82' (PR-DMH-06)                       | REMODEL                    |
| PR-CB-07                 | 16+89.33<br>11.0 L | RIM ELEV. = 250.53 |                                          | 245.77' (PR-DMH-06)<br>245.67' (PR-LB-03) | PROP. CB                   |
| PR-DMH-06                | 16+81.45<br>11.0 L | RIM ELEV. = 250.56 | 245.67' (PR-CB-07)<br>246.38' (EX-CB-18) | 245.57' (PR-FE-02)                        | PROP. DMH                  |
| PR-FE-02                 | 16+80.98<br>34.3 L | RIM ELEV. = 247.04 | 245.37' (PR-DMH-06)                      |                                           | FLARED END                 |
| PR-LB-03                 | 16+89.53<br>20.7 L | RIM ELEV. = 250.87 | 245.62' (PR-CB-07)                       |                                           | LEACHING BASIN SOLID COVER |



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| PROJECT FILE NO. |                        | 609054    |              |

WETLAND BOUNDARY  
(BANK OF INTERMITTENT STREAM)

LOCATION OF LEACHING BASIN-04  
ESTIMATED SEASONAL HIGH GROUND WATER DEPTH 2.7' BELOW SURFACE  
LEACHING CATCH BASIN NOT FEASIBLE  
DEEP SUMP CATCH BASIN CB-08 TO REMAIN IN ROAD.

BEGIN CEM. CONC ENCASEMENT OF  
PROP. 10" WATER MAIN  
12 IN ENCASEMENT ON ALL SIDES  
STA 22+75

PR-DMH-07  
PROP. DMH  
PROP. F&C

PROP. 10" X 6" TEE  
MECH. JOINT  
6" GATE VALVE AND BOX  
PROP. 6" CL 52 DI PIPE

PR-CIT-01  
CHANGE IN TYPE CB TO DMH  
PROP. F&C

RET.  
23 LF - 12" RC  
S=0.014'

RET. EXIST HEADWALL  
JECT PROP. FITTING  
ST 10" WATER MAIN

PR-CB-10  
PROP. CB  
PROP. F&G

PROP. 10", 22 $\frac{1}{2}$ <sup>o</sup>  
MECH. JOINTS

60 LF - 12' RC  
S=0.005'

PR-DMH-09  
PROP. DMH  
PROP. F&C

INV 15\*

EL=2.

| NAME     | STATION<br>OFFSET | STRUCTURE |
|----------|-------------------|-----------|
| PR-CR-08 | 22+59.77          | RIM ELEV  |

|  |     |
|--|-----|
|  | PR- |
|  | PR- |
|  | PR- |

|           |                    |           |
|-----------|--------------------|-----------|
| PR-CB-11  | 24+05.47<br>10.9 R | RIM ELEV. |
| PR-CIT-01 | 23+76.52<br>24.6 L | RIM ELEV. |
| PR-PAV-02 | 22+68.88           | PAVEMENT  |

|  |      |
|--|------|
|  | PR-D |
|  | PR-D |
|  | PR-D |

|                     |                                          |                      |
|---------------------|------------------------------------------|----------------------|
| PR-DMH-09           | 9.3 L                                    | RIM ELEV.            |
| <del>PR-LB-04</del> | <del>22+59.72</del><br><del>20.1 L</del> | <del>RIM ELEV.</del> |

| NAME      | STATION<br>OFFSET  | STRUCTURE DETAILS  | INV. ELEV. IN                                                   | INV. ELEV. OUT                            | REMARKS                    |
|-----------|--------------------|--------------------|-----------------------------------------------------------------|-------------------------------------------|----------------------------|
| PR-CB-08  | 22+59.77<br>10.9 L | RIM ELEV. = 236.80 |                                                                 | 232.55' (PR-LB-04)<br>232.68' (PR-DMH-07) | PROP CB                    |
| PR-CB-09  | 22+59.85<br>10.9 R | RIM ELEV. = 236.30 |                                                                 | 231.05' (PR-DMH-07)                       | PROP CB                    |
| PR-CB-10  | 24+05.34<br>10.9 L | RIM ELEV. = 233.73 |                                                                 | 229.40' (PR-DMH-08)                       | PROP. CB                   |
| PR-CB-11  | 24+05.47<br>10.9 R | RIM ELEV. = 233.63 |                                                                 | 229.12' (PR-DMH-08)                       | PROP. CB                   |
| PR-CIT-01 | 23+76.52<br>24.6 L | RIM ELEV. = 234.42 | 228.82' (PR-DMH-08)<br>228.82' (PR-DMH-09)                      | 228.72' ()                                | CHANGE IN TYPE CB TO DMH   |
| PR-DMH-07 | 22+68.88<br>9.1 L  | RIM ELEV. = 236.44 | 230.90' (PR-CB-09)<br>232.30' (PR-CB-08)                        | 230.50' (PR-DMH-08)                       | PROP. DMH                  |
| PR-DMH-08 | 23+70.70<br>9.8 L  | RIM ELEV. = 233.77 | 228.95' (PR-CB-11)<br>229.02' (PR-CB-10)<br>229.01' (PR-DMH-07) | 228.92' (PR-CIT-01)                       | PROP. DMH                  |
| PR-DMH-09 | 24+38.98<br>9.3 L  | RIM ELEV. = 233.87 | 230.38' (PR-DMH-10)                                             | 229.15' (PR-CIT-01)                       | PROP. DMH                  |
| PR-LB-04  | 22+59.72<br>20.1 L | RIM ELEV. = 237.41 | 232.55' (PR-CB-08)                                              |                                           | LEACHING BASIN SOLID COVER |

C.B. #19  
RIM=233.67  
INV. OUT=229.07

C.B. #20  
RIM=233.72  
INV. IN=228.72  
INV. OUT=228.72

0 20 50 100

SCALE: 1" = 20'

SEPH W. & AMANDA LENNON,  
LIVING TRUSTEES OF THE  
A+JOSEPH LENNON LIVING TRUST  
BK/PG 64219/262  
PLAN NO 1628 OF 1972  
PARCEL #R09 5 A  
3 BULKELEY ROAD

BONNIE COOPER & GINNY M. MAHER-COOPER  
BK/PG 32345/306  
PLAN NO 1018 OF 1972  
PARCEL #R09 1 0  
2 BULKELEY ROAD

20170044A21 COLOR | ITI 01 DWG      Plotted on 27-Mar-2024 10:12 AM



- NOTES:
- SEE SHEET 57 FOR GENERAL UTILITY, ELECTRICAL AND TREE TRIMMING NOTES
  - \* - CONTRACTOR TO MATCH EXISTING PIPE INVERT. INVERT GIVEN IS APPROXIMATE

GAS NOTES:

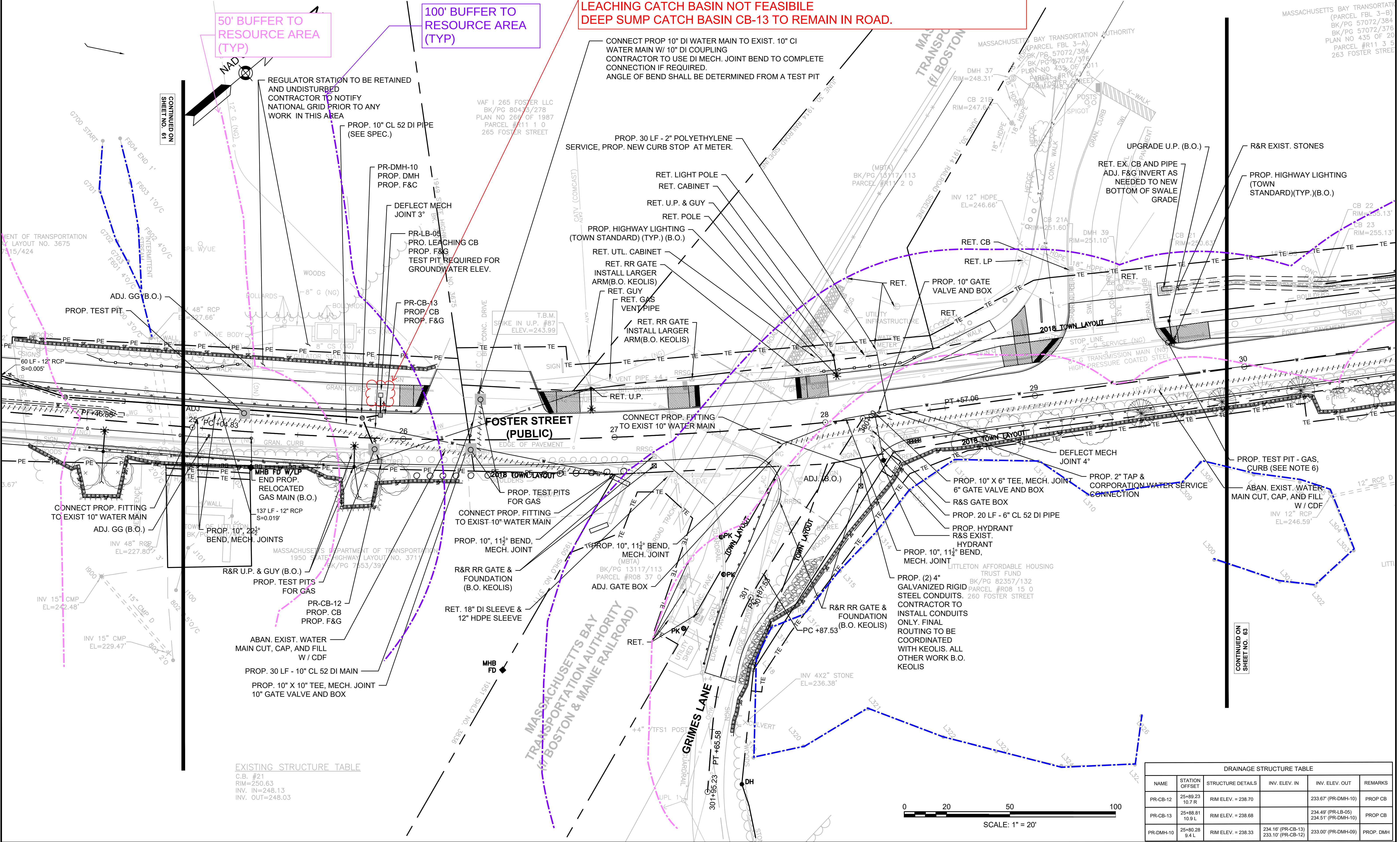
- NOTIFY NATIONAL GRID DAMAGE PREVENTION, MEGHAN KELLEY, AT(339) 203-0490 TWO WEEKS PRIOR TO EXCAVATING NEAR REGULATOR STATION OR GAS MAIN. HIGH PRESSURE GAS MAINS ARE PRESENT IN PROJECT AREA.
- TO REPORT ANY DAMAGE TO A GAS LINE CALL NATIONAL GRID'S EMERGENCY GAS LEAKS NUMBER AT 1-800-233-5325 IMMEDIATELY.
- ALL TEST PITS PERFORMED NEAR GAS MAIN SHALL BE PERFORMED WITH A VACUUM TRUCK SEE SPECIAL PROVISION FOR ITEM 141.101

LITTLETON  
RECONSTRUCTION OF FOSTER STREET

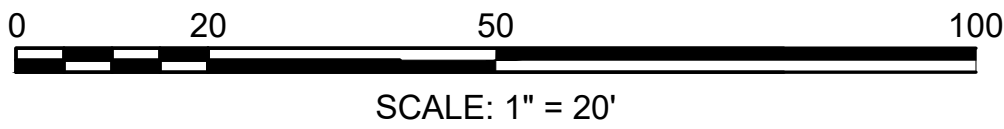
| STATE                   | FED. AID PROJ. NO.     | SHEET NO. | TOTAL SHEETS |
|-------------------------|------------------------|-----------|--------------|
| MA                      | STP/CMQ/TAP-0033(037)X | 62        | 128          |
| PROJECT FILE NO. 609054 |                        |           |              |

DRAINAGE & UTILITY PLANS

LOCATION OF LEACHING BASIN-05  
ESTIMATED SEASONAL HIGH GROUND WATER DEPTH 3.0' BELOW SURFACE  
LEACHING CATCH BASIN NOT FEASIBLE  
DEEP SUMP CATCH BASIN CB-13 TO REMAIN IN ROAD.



| DRAINAGE STRUCTURE TABLE |                    |                    |                                        |                                         |           |
|--------------------------|--------------------|--------------------|----------------------------------------|-----------------------------------------|-----------|
| NAME                     | STATION OFFSET     | STRUCTURE DETAILS  | INV. ELEV. IN                          | INV. ELEV. OUT                          | REMARKS   |
| PR-CB-12                 | 25+89.23<br>10.7 R | RIM ELEV. = 238.70 |                                        | 233.67 (PR-DMH-10)                      | PROP CB   |
| PR-CB-13                 | 25+98.81<br>10.9 L | RIM ELEV. = 238.68 |                                        | 234.49 (PR-LB-05)<br>234.51 (PR-DMH-10) | PROP CB   |
| PR-DMH-10                | 25+90.28<br>9.4 L  | RIM ELEV. = 238.33 | 234.16 (PR-CB-13)<br>233.10 (PR-CB-12) | 233.00 (PR-DMH-09)                      | PROP. DMH |





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|                  |                        |           |              |
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| PROJECT FILE NO. |                        | 609054    |              |

[illegible]

|                 |                     |
|-----------------|---------------------|
| C.B. #21        | C.B. #26            |
| RIM=250.63      | RIM=260.68          |
| INV. IN=248.13  | INV. OUT=257.38     |
| INV. OUT=248.03 |                     |
| C.B. #22        | C.B. #27            |
| RIM=255.13      | RIM=260.40          |
| INV.=251.53     | INV. OUT=256.30     |
| C.B. #23        | D.M.H. #28          |
| RIM=255.14      | RIM=260.06          |
| INV. OUT=251.54 | INV. IN (NW)=256.10 |
|                 | INV. IN (NE)=254.40 |
| C.B. #24        | INV. IN (E)=256.20  |
| RIM=260.31      | INV. OUT=251.46     |
| INV. IN=257.51  | D.M.H. #29          |
| INV. OUT=257.51 | RIM=270.50          |
| C.B. #25        | INV. IN=266.00      |
| RIM=262.28      | INV. OUT=265.90     |
| INV. OUT=258.98 |                     |

| DRAINAGE STRUCTURE TABLE |                    |                    |                                                                 |                         |             |
|--------------------------|--------------------|--------------------|-----------------------------------------------------------------|-------------------------|-------------|
| NAME                     | STATION OFFSET     | STRUCTURE DETAILS  | INV. ELEV. IN                                                   | INV. ELEV. OUT          | REMARKS     |
| EX-CB-16                 | 31+72.28<br>10.2 R | RIM ELEV. = 260.63 |                                                                 | 256.30' (EX-DMH-12)     | EXISTING CB |
| EX-CBDB 22 23            | 30+42.39<br>33.7 L | RIM ELEV. = 256.60 | 251.60' (PR-CB-14)                                              | 251.54' (EX-CB-21)      | RETAIN      |
| EX-DMH-12                | 31+61.92<br>1.7 R  | RIM ELEV. = 260.02 | 254.68' (PR-CB-16)<br>256.26' (EX-CB-16)<br>254.96' (EX-DMH-29) | 251.46' ( )             | EXIST DMH   |
| EX-DMH-29                | 33+59.34<br>2.6 R  | RIM ELEV. = 270.40 | 266.00' (EX-DMH-31)                                             | 265.90' (EX-DMH-12)     | EXIST DMH   |
| PR-CB-14                 | 31+45.23<br>32.5 L | RIM ELEV. = 259.54 | 257.00' (PR-CB-15)                                              | 254.37' (EX-CBDB 22 23) | PROP CB     |
| PR-CB-15                 | 31+73.61<br>30.3 L | RIM ELEV. = 262.22 |                                                                 | 257.45' (PR-CB-14)      | RET.        |
| PR-CB-16                 | 31+69.74<br>15.2 L | RIM ELEV. = 260.72 |                                                                 | 255.60' (EX-DMH-12)     | PROP. CB    |



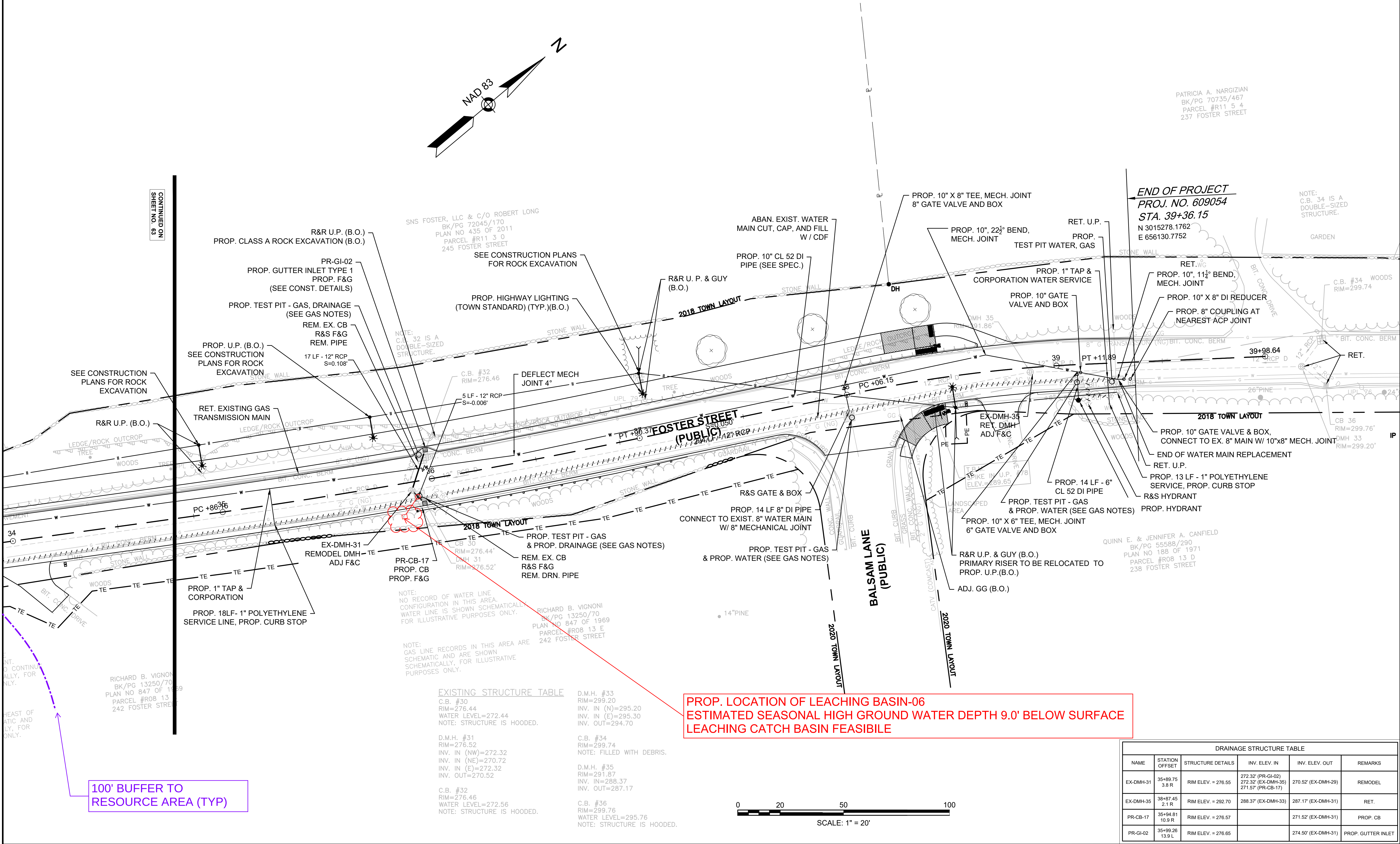
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DRAINAGE & UTILITY PLANS



EXISTING STRUCTURE TABLE

|                                                                                                                 |                                                                                         |
|-----------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| C.B. #30<br>RIM=276.44<br>WATER LEVEL=272.44<br>NOTE: STRUCTURE IS HOODED.                                      | D.M.H. #33<br>RIM=299.20<br>INV. IN (N)=295.20<br>INV. IN (E)=295.30<br>INV. OUT=294.70 |
| D.M.H. #31<br>RIM=276.52<br>INV. IN (NW)=272.32<br>INV. IN (NE)=270.72<br>INV. IN (E)=272.32<br>INV. OUT=270.52 | C.B. #34<br>RIM=299.74<br>NOTE: FILLED WITH DEBRIS.                                     |
| C.B. #32<br>RIM=276.46<br>WATER LEVEL=272.56<br>NOTE: STRUCTURE IS HOODED.                                      | D.M.H. #35<br>RIM=291.87<br>INV. IN=288.37<br>INV. OUT=287.17                           |
|                                                                                                                 | C.B. #36<br>RIM=299.76<br>WATER LEVEL=295.76<br>NOTE: STRUCTURE IS HOODED.              |

PROP. LOCATION OF LEACHING BASIN-06  
ESTIMATED SEASONAL HIGH GROUND WATER DEPTH 9.0' BELOW SURFACE  
LEACHING CATCH BASIN FEASIBLE

| DRAINAGE STRUCTURE TABLE |                    |                    |                                                                 |                     |                    |
|--------------------------|--------------------|--------------------|-----------------------------------------------------------------|---------------------|--------------------|
| NAME                     | STATION<br>OFFSET  | STRUCTURE DETAILS  | INV. ELEV. IN                                                   | INV. ELEV. OUT      | REMARKS            |
| EX-DMH-31                | 35+89.75<br>3.8 R  | RIM ELEV. = 276.55 | 272.32' (PR-GI-02)<br>272.32' (EX-DMH-35)<br>271.57' (PR-CB-17) | 270.52' (EX-DMH-29) | REMODEL            |
| EX-DMH-35                | 38+87.45<br>2.1 R  | RIM ELEV. = 292.70 | 288.37' (EX-DMH-33)                                             | 287.17' (EX-DMH-31) | RET.               |
| PR-CB-17                 | 35+94.81<br>10.9 R | RIM ELEV. = 276.57 |                                                                 | 271.52' (EX-DMH-31) | PROP. CB           |
| PR-GI-02                 | 35+99.26<br>13.9 L | RIM ELEV. = 276.65 |                                                                 | 274.50' (EX-DMH-31) | PROP. GUTTER INLET |