# PROPOSED SITE PLAN SET
## PROPOSED AUTOMOTIVE SALES AND SERVICE CENTER
## 71 BISHOP STREET
## FRAMINGHAM, MASSACHUSETTS

### NOTES:

1. SUBJECT PARCEL IS SHOWN AS ASSESSORS MAP 84, BLOCK 165 LOT 04. RECORD TITLE FROM BOOK 64092, PAGE 318.
2. UTILITY LOCATIONS DEPICTED ON THIS PLAN, BOTH ABOVE- AND BELOW-GROUND, ARE BASED UPON DIRECT FIELD OBSERVATIONS MADE BY METROWEST ENGINEERING, INC. PERSONNEL DURING A FIELD SURVEY, RECORD PLAN LOCATIONS, OR DIGSAFE PAINT-INDICATORS. METROWEST ENGINEERING, INC. DOES NOT WARRANT THAT ALL UTILITIES ARE SHOWN OR THAT UTILITIES THAT ARE DEPICTED ARE SHOWN IN THE CORRECT LOCATION, OR WITH THE PROPER MATERIAL DESIGNATION. METROWEST ENGINEERING, INC. DOES NOT WARRANT OR PROVIDE AN EXPRESS OR IMPLIED WARRANTY THAT ALL SUBSURFACE IMPROVEMENTS ARE SHOWN OR ARE SHOWN CORRECTLY, INCLUDING, BUT NOT LIMITED TO, UTILITIES, UNDERGROUND VAULTS, UNDERGROUND TANKS OR CHAMBERS, BUNKERS, DUCT BANKS, AND/OR OTHER MAN-MADE IMPROVEMENTS THAT LIE BENEATH THE GROUND SURFACE AT THE TIME OF THE SURVEY.
3. CONTRACTOR IS SOLELY RESPONSIBLE FOR ESTABLISHING EXISTING LOCATIONS OF ALL SUB-SURFACE UTILITIES AND MAN-MADE IMPROVEMENTS AND FOR THE REQUIREMENTS TO REPLACE, RELOCATE OR REPAIR EXISTING UTILITIES IN THE EVENT OF DAMAGE OCCURRING DURING CONSTRUCTION. MWE IS NOT RESPONSIBLE OR LIABLE FOR DELAYS OR COSTS ASSOCIATED WITH REMOVING/REPLACING/RELOCATING OF EXISTING UTILITIES REGARDLESS OF WHETHER SAID UTILITIES ARE ACCURATELY DEPICTED ON THIS SURVEY.
4. THE PROPERTY DESCRIBED ON THIS SURVEY DOES NOT LIE WITHIN A SPECIAL FLOOD HAZARD AREA AS DEFINED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY; THE PROPERTY LIES WITHIN ZONE "X" OF THE FLOOD INSURANCE RATE MAP IDENTIFIED AS MAPS NUMBER 25017C0518F & 25017C0519F, BEARING AN EFFECTIVE DATE OF JULY 7, 2014.

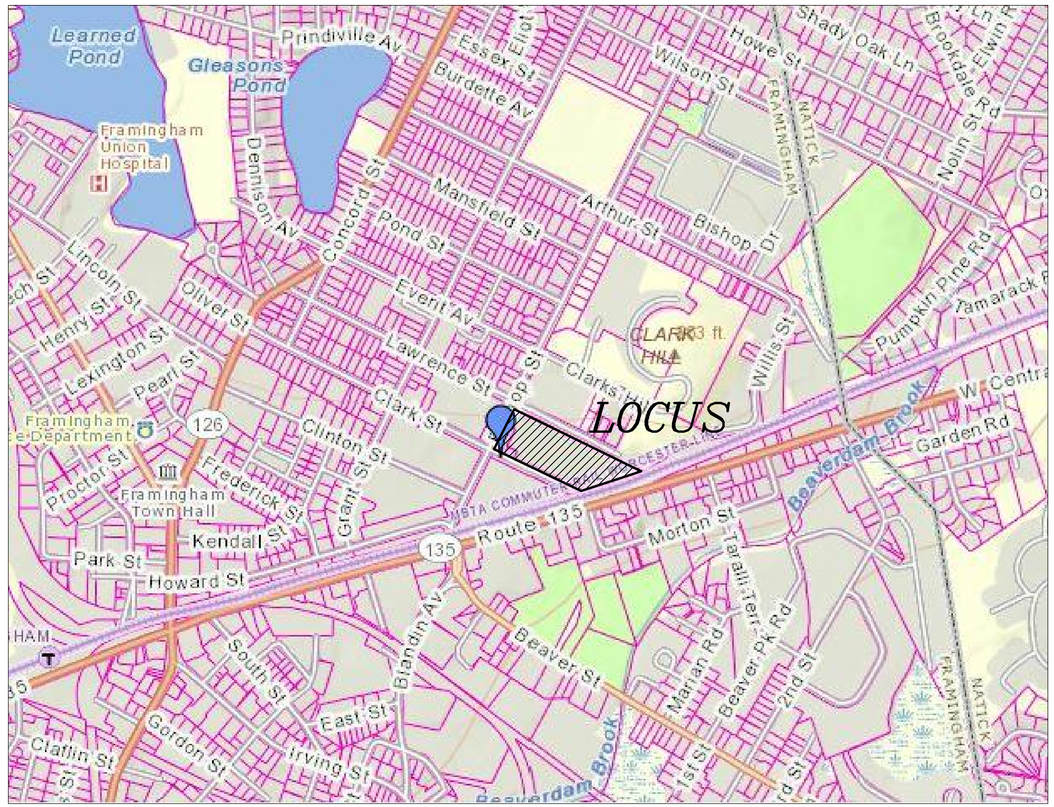
DIG SAFE 811

CONTRACTOR TO VERIFY ACTUAL LOCATION OF EXISTING UTILITY SERVICES IN THE FIELD PRIOR TO CONSTRUCTION (WATER, ELECTRICAL, ETC.) CALL DIG-SAFE BEFORE YOU DIG 811.

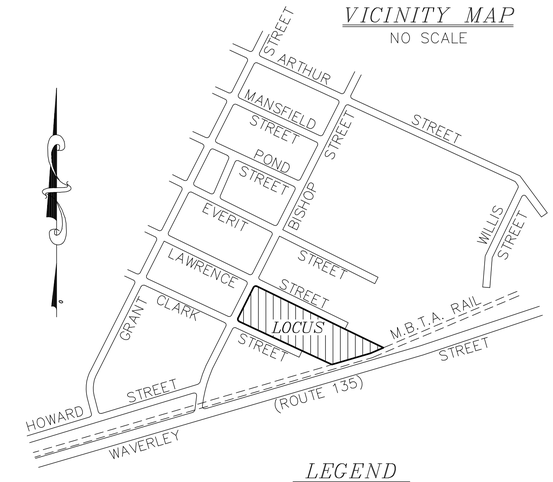
### ZONING:

*M-GENERAL MANUFACTURING*

ANY NON-RESIDENTIAL USE
MINIMUM AREA= 6,000 SQUARE FEET
MAXIMUM HEIGHT= 6 STORIES/80 FEET
SETBACKS:
FRONT YARD= 50 FEET
SIDE YARD = 15 FEET
REAR YARD= 15 FEET
LOT COVERAGE= N/A
FLOOR AREA RATIO= 0.32
LANDSCAPED OPEN SPACE SURFACE RATIO= 0.20




### VICINITY MAP
NO SCALE




### LEGEND

| | |
|---|---|
| D.C.B. | DRAIN CATCH BASIN |
| C.C.B. | CAPE COD BERM |
| B | BOLLARDS |
| CB | CONCRETE BOUND |
| V.G.C. | VERTICAL GRANITE CURB |
| (F) | FOUND |
| GG | GAS GATE |
| WG | WATER GATE |
| + 200.0 | EXISTING SPOT GRADE |
| 200 | EXISTING GRADING |
| FG160 | PROPOSED GRADING |
| +160.05 | PROPOSED SPOT GRADE |
| HYD | HYDRANT |
| IR | IRON ROD |
| C.I. | CAST IRON |
| D.M.H. | DRAIN MANHOLE |
| E.M. | ELECTRIC MANHOLE |
| S.M.H. | SEWER MANHOLE |
| N/F | NOW OR FORMERLY |
| (4) | NUMBER OF PARKING SPACES |
| OHW | OVERHEAD WIRES |
| PROP. | PROPOSED |
| UP | UTILITY POLE |
| RCP | REINFORCED CONCRETE PIPE |
| WSO | WATER SHUTOFF |
| W | WATER LINE |
| MW | MONITOR WELL |
| IWF | ISOLATED WETLAND FLAG |

### SHEET INDEX


COVER SHEET
SHEET C100 — EXISTING CONDITIONS PLAN
SHEET C200 — EROSION AND SEDIMENT CONTROL PLAN
SHEET C300 — PROPOSED LAYOUT PLAN
SHEETS C400 & C401 — PROPOSED GRADING PLANS
SHEETS C500 & C501 — PROPOSED SITE PLAN
SHEET C600 — LOCUS PLAN
SHEET C700 & C701 — DETAIL PLANS
LIGHTING PLAN


### PROPOSED PARKING REQUIREMENTS

| | PARKING REQUIREMENT | PROPOSED FLOOR AREA/BAYS | TOTAL |
|---|---|---|---|
| SPRINTER SALES | 1 SPACE PER 250 S.F. OF GROSS FLOOR AREA | 3,500 S.F. | 14.0 |
| SPRINTER SERVICE | 1 SPACE PER 400 S.F. OF GROSS FLOOR AREA<br>1 SPACE PER SERVICE BAY | 17,706 S.F.<br>9 BAYS | 44.3<br>9.0 |
| COLLISION CENTER | 1 SPACE PER 400 S.F. OF GROSS FLOOR AREA<br>1 SPACE PER SERVICE BAY | 30,920 S.F.<br>20 BAYS | 77.3<br>20.0 |
| WHOLESALE PARTS | 1 SPACE PER 1,200 S.F. OF GROSS FLOOR AREA | 19,634 S.F. | 16.4 |
| TOTAL NUMBER OF REQUIRED PARKING SPACES | | | 181.0 |
| NUMBER OF PROPOSED EXTERIOR PARKING SPACES | | | 355 |

### ZONING TABLE: 71 BISHOP STREET
MAP 84, BLOCK 165, LOT 04

| DESCRIPTION | REQUIRED MANUFACTURING ZONE | EXISTING | PROPOSED |
|---|---|---|---|
| LOT AREA | 6,000 SQ. FT. (MIN.) | 273,206 SQ. FT. | 273,206 SQ. FT. |
| LOT FRONTAGE | 50 FT. (MIN.) | 334.51 FT. | 334.51 FT. |
| FRONT YARD SETBACK | 50 FT. (MIN.) | 0.0 FT. | 56.5 FT. |
| SIDE YARD SETBACK | 15 FT. (MIN.) | 20.6 FT. | 69.2 FT. |
| REAR YARD SETBACK | 15 FT. (MIN.) | 354.1 FT. | 235.0 FT. |
| MAX BUILDING HEIGHT | 80 FT. (6 STORIES) | N.A. | 25.0 FT. |
| FLOOR AREA | N/A | 88,116 SQ. FT. | 65,162 SQ. FT |
| FLOOR AREA RATIO | 0.32 (MAX.) | 0.322 | 0.239 |
| MAX. LOT COVERAGE | N.A. | 0.322 | 0.239 |
| BUILDING AREA | N/A | 88,116 SQ. FT. | 65,162 SQ. FT |
| OTHER IMPERVIOUS SURFACES | N/A | 124,710 SQ. FT. | 184,942 SQ. FT. |
| TOTAL IMPERVIOUS AREA | N/A | 212,826 SQ. FT. | 250,104 SQ. FT. |
| PARKING | 181 SPACES | 0 SPACES | 355 SPACES |
| HANDICAP PARKING | 0 SPACES | 0 SPACES | 6 SPACES |
| LANDSCAPED OPEN SPACE SURFACE RATIO | 0.20 | 0.221 | 0.085 |
| UPLAND AREA | 6,000 SQ. FT. (MIN.) | 272,704 SQ. FT. | 272,704 SQ. FT. |

ZONING REQUIREMENTS ARE FOR NON-RESIDENTIAL USE
PRE-EXISTING IMPERVIOUS COVERAGE=209,756± SQUARE FEET

FOR METROWEST ENGINEERING, INC. DATE
ROBERT A. GEMMA, P.E.(CIVIL) # 31967
P.L.S. # 37046

FRAMINGHAM PLANNING BOARD
SITE PLAN REVIEW

DATE:

THE ENDORSEMENT OF THE PLANNING BOARD SHOULD NOT BE CONSTRUED TO BE A DETERMINATION OF CONFORMANCE WITH ZONING REGULATIONS.

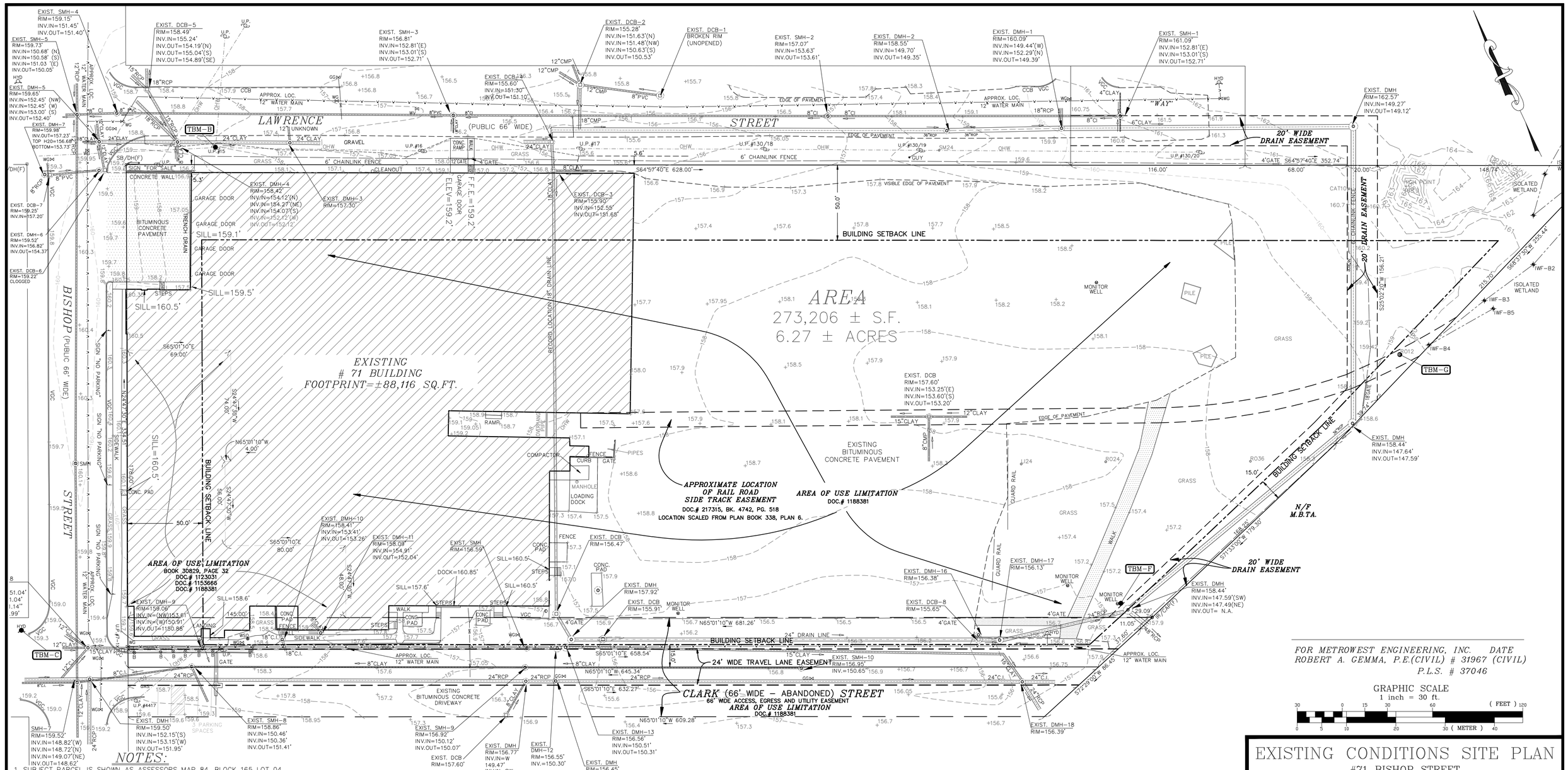
COVER SHEET
#71 BISHOP STREET
IN
FRAMINGHAM, MASS

PREPARED FOR:
HERB CHAMBERS COMPANIES
259 McGRATH HIGHWAY
SOMERVILLE, MA 02143

PROPERTY OF:
CLINTON 100 CPI, LLC
43 BROAD ST
HUDSON, MA 01749

ENGINEERS & SURVEYORS:
MWE
METROWEST ENGINEERING, INC.
75 FRANKLIN STREET
FRAMINGHAM, MA 01702
TEL.: (508)626-0063
FAX: (508)875-6440

| | | |
|---|---|---|
| COVER SHEET | | DATE: NOVEMBER 30, 2015 |
| CALC'D BY: BTN/RAG | FIELD BK: 632 | CAD FILE: PROP_SP2.dwg |
| DRAFTER: BTN | PROJECT: FRM_CLI | DWG FILE: SP113015.dwg |




FOR METROWEST ENGINEERING, INC. DATE
ROBERT A. GEMMA, P.E.(CIVIL) # 31967 (CIVIL)
P.L.S. # 37046

GRAPHIC SCALE
1 inch = 30 ft.

## NOTES:

1. SUBJECT PARCEL IS SHOWN AS ASSESSORS MAP 84, BLOCK 165 LOT 04. RECORD TITLE FROM BOOK 64092, PAGE 318.
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## ZONING:

GENERAL MANUFACTURING – M
ANY NON–RESIDENTIAL USE
MINIMUM AREA= 6,000 SQUARE FEET
MAXIMUM HEIGHT= 6 STORIES/80 FEET
MINIMUM OPEN SPACE (SURFACE RATIO) = 20%
MAXIMUM LOT COVERAGE = N.A.
MAXIMUM FLOOR AREA RATIO = 0.32
SETBACKS:
FRONT YARD = 50 FEET
SIDE YARD = 50 FEET
REAR YARD = 15 FEET

CONTRACTOR TO VERIFY ACTUAL LOCATION OF EXISTING UTILITY SERVICES IN THE FIELD PRIOR TO CONSTRUCTION (WATER, ELECTRICAL, ETC.) CALL DIG–SAFE BEFORE YOU DIG 811.

## EXISTING TREE DESCRIPTION LEGEND

| CODE | DESCRIPTION |
|---|---|
| RO# | RED OAK |
| SM# | SUGAR MAPLE |

DETAIL
TREE LOCATION
RO14
TREE CODE — TREE DIAMETER

## BENCHMARKS

ELEVATION SHOWN IS BASED ON N.A.V.D. 1988 DATUM

| T.B.M. | DESCRIPTION | ELEVATION |
|---|---|---|
| B | MAG SET IN UP#15 | 160.12' |
| C | DHN SET IN HYDRANT | 162.37' |
| F | DHN SET CORNER METER WELL CAP | 159.24' |
| G | DHN SET ON 12" RED OAK | 160.60' |

FRAMINGHAM PLANNING BOARD
SITE PLAN REVIEW

DATE:

THE ENDORSEMENT OF THE PLANNING BOARD SHOULD NOT BE CONSTRUED TO BE A DETERMINATION OF CONFORMANCE WITH ZONING REGULATIONS.

## LEGEND

| | |
|---|---|
| VGC | VERTICAL GRANIT CURB |
| CCB | CAPE COD BERM |
| DMH | DRAIN MANHOLE |
| DCB | DRAIN CATCH BASIN |
| SMH | SEWER MANHOLE |
| EM | ELECTRIC MANHOLE |
| WG | WATER GATE |
| WSO | WATER SHUTOFF |
| GG | GAS GATE |
| UP | UTILITY POLE |
| MW | MONITOR WELL |
| CB | CONCRETE BOUND |
| IR | IRON ROD |
| (F) | FOUND |
| N/F | NOW OR FORMERLY |
| +200.0 | EXISTING SPOT GRADE |
| —200— | EXISTING GRADING |
| B | BOLLARDS |
| IWF | ISOLATE WETLAND FLAG |
| HYD | HYDRANT |

# EXISTING CONDITIONS SITE PLAN
#71 BISHOP STREET
IN
FRAMINGHAM, MASS

PREPARED FOR:
HERB CHAMBERS COMPANIES
259 McGRATH HIGHWAY
SOMERVILLE, MA 02143

PROPERTY OF:
CLINTON 100 CPI, LLC
43 BORAD STREET
HUDSON, MA 01719

ENGINEERS & SURVEYORS:
MWE
METROWEST ENGINEERING, INC.
75 FRANKLIN STREET
FRAMINGHAM, MA 01702
TEL.: (508)626–0063
FAX: (508)875–6440

| | | |
|---|---|---|
| SHEET C100 | | DATE: NOVEMBER 16, 2015 |
| CALC'D BY: PHA | FIELD BK: 632 | CAD FILE: EC_SP_SET.dwg |
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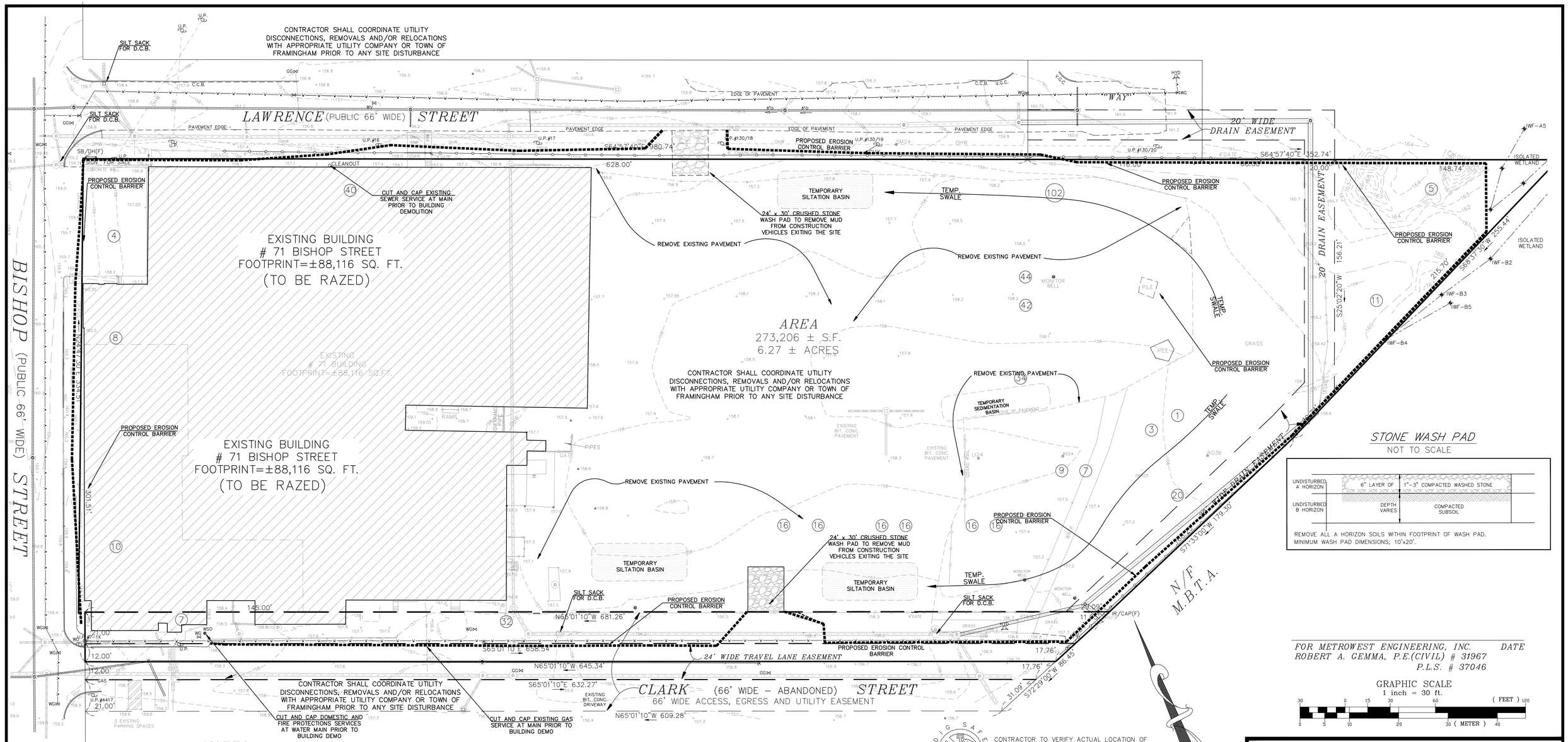


## STONE WASH PAD

NOT TO SCALE

| | | |
|---|---|---|
| UNDISTURBED A HORIZON | 6" LAYER OF | 1"-3" COMPACTED WASHED STONE |
| UNDISTURBED B HORIZON | DEPTH VARIES | COMPACTED SUBSOIL |

REMOVE ALL A HORIZON SOILS WITHIN FOOTPRINT OF WASH PAD.
MINIMUM WASH PAD DIMENSIONS; 10'x20'.

FOR METROWEST ENGINEERING, INC. DATE
ROBERT A. GEMMA, P.E.(CIVIL) # 31967
P.L.S. # 37046

GRAPHIC SCALE
1 inch = 30 ft.

30 0 15 30 60 ( FEET ) 120
0 5 10 20 30 ( METER ) 40

## NOTES:

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5. SEE SYMBOL LEGEND ON COVER SHEET.

## EROSION CONTROL NOTES:

1.) CONTRACTOR SHALL MODIFY SEDIMENTATION CONTROLS AS NECESSARY DURING CONSTRUCTION.

2.) CONTRACTOR SHALL INSPECT AND CLEAN ALL SILTATION CONTROL MEASURES ON A WEEKLY BASIS AND AFTER ALL STORMS WITH A PRECIPITATION AMOUNT IN EXCESS OF 1". CONTRACTOR SHALL IMMEDIATELY REPAIR ANY DEFICIENCIES FOUND ON SILTATION CONTROL MEASURES.

3.) CONTRACTOR SHALL MAINTAIN AN INVENTORY OF EMERGENCY SUPPLIES ON SITE IN A PROTECTED LOCATION INCLUDING, BUT NOT LIMITED TO HAYBALES, SILT FENCE, WASHED STONE, PVC PIPE, MULCH AND SEED.

4.) ALL DISTURBED AREAS SHALL BE PROPERLY STABILIZED BEFORE OR THROUGH THE WINTER TO ELIMINATE DESTABILIZATION OR SILTATION DURING THE SPRING THAW.

5.) ANY RELEASE OF WATER FROM TEMPORARY SILTATION PONDS SHALL BE FREE OF SILT AND SEDIMENT AND SHALL MEET WATER QUALITY STANDARDS FOR CLASS B WATER IN THE COMMONWEALTH OF MASSACHUSETTS.

6.) IF GROUNDWATER DE-WATERING IS REQUIRED, CONTRACTOR SHALL IMPLEMENT A FILTERING SYSTEM FOR PUMPED GROUNDWATER TO REMOVE SILT AND SEDIMENT. THE DIRECT DISCHARGE OF ANY DE-WATERING OPERATION INTO A WETLAND IS PROHIBITED.

7.) CONTRACTOR SHALL REMOVE AND PROPERLY DISPOSE OF ALL SEDIMENTS WHEN THEY HAVE ACCUMULATED TO A HEIGHT APPROXIMATELY EQUAL TO ONE HALF OF THE HEIGHT OF THE CORRESPONDING EROSION AND SEDIMENTATION CONTROL MEASURE.

8.) CONTRACTOR SHALL KEEP COPIES OF THE EROSION CONTROL PLAN AND INSPECTION REPORTS SO THEY ARE ACCESSIBLE AT ALL TIMES.

9.) CONTRACTOR TO PROTECT ALL DRAINAGE INLETS FROM SILT AND SEDIMENT UNTIL THEIR TRIBUTARY AREAS ARE FULLY STABILIZED.

ABUTTING ROADS.

11. ANY DEWATERING PERFORMED ON SITE REQUIRING A CONNECTION OR DISCHARGE TO THE MUNICIPAL DRAINAGE SYSTEM MUST BE APPROVED BY THE TOWN ENGINEER PRIOR TO DISCHARGE.

DIG SAFE 811

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FRAMINGHAM PLANNING BOARD
SITE PLAN REVIEW

DATE:

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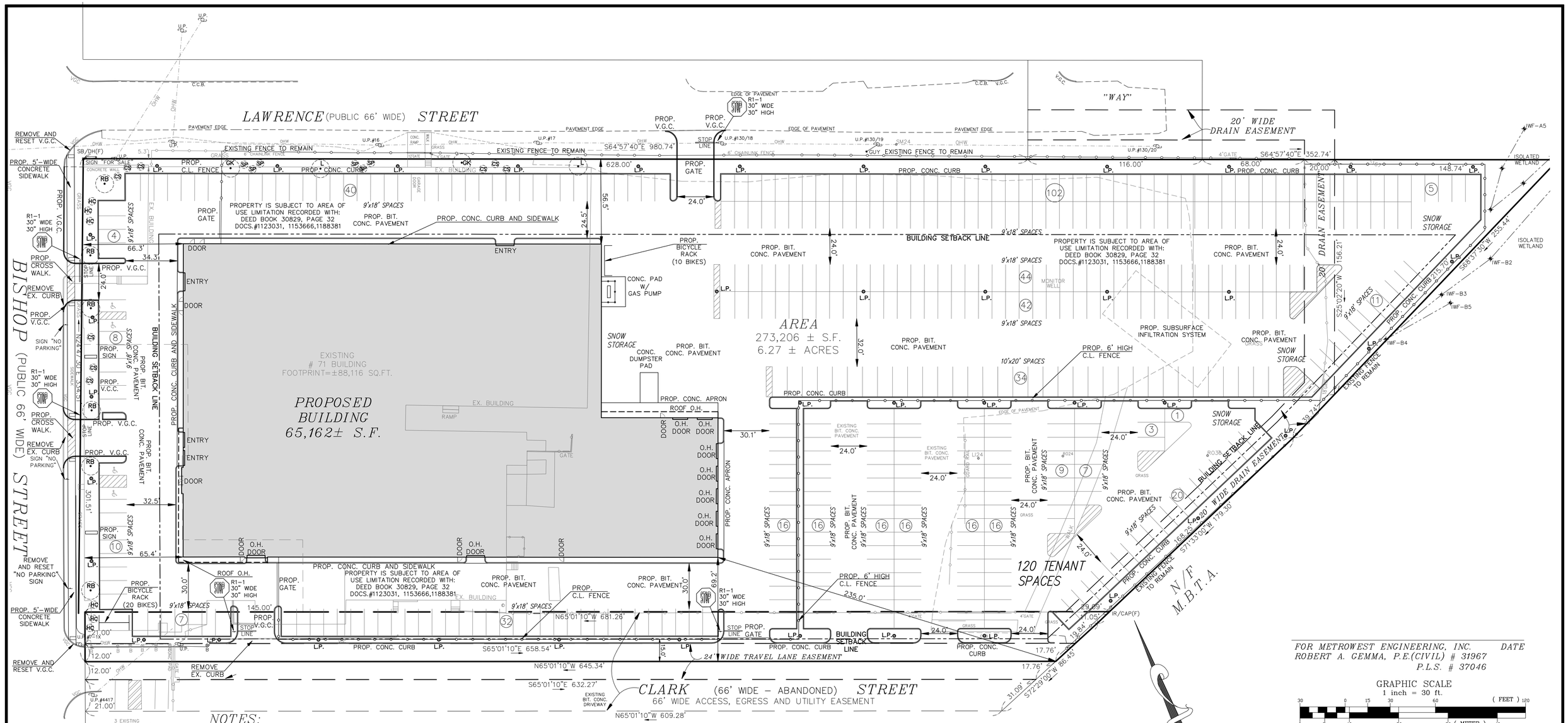
# PROPOSED EROSION AND SEDIMENT CONTROL PLAN
#71 BISHOP STREET
IN
FRAMINGHAM, MASS

PREPARED FOR:
HERB CHAMBERS COMPANIES
259 McGRATH HIGHWAY
SOMERVILLE, MA 02143

PROPERTY OF:
CLINTON 100 CPI, LLC
43 BROAD ST
HUDSON, MA 01749

ENGINEERS & SURVEYORS:
METROWEST ENGINEERING, INC.
75 FRANKLIN STREET
FRAMINGHAM, MA 01702
TEL.: (508)626-0063
FAX: (508)875-6440

| | | |
|---|---|---|
| SHEET C200 | | DATE: NOVEMBER 30, 2015 |
| CALC'D BY: BTN/RAG | FIELD BK: 632 | CAD FILE: PROP_SP2.dwg |
| DRAFTER: BTN | PROJECT: FRM_CLI | DWG FILE: SP113015.dwg |




FOR METROWEST ENGINEERING, INC. DATE
ROBERT A. GEMMA, P.E.(CIVIL) # 31967
P.L.S. # 37046

GRAPHIC SCALE
1 inch = 30 ft.
( FEET ) 30 0 15 30 60 120
( METER ) 0 5 10 20 30 40

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5. SEE SYMBOL LEGEND ON COVER SHEET.

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## ZONING:

### M–GENERAL MANUFACTURING

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MAXIMUM HEIGHT= 6 STORY/80 FEET
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REAR YARD= 15 FEET
LOT COVERAGE= N/A
FLOOR AREA RATIO= 0.32
LANDSCAPED OPEN SPACE SURFACE RATIO= 0.20

## PROPOSED PLANTING SCHEDULE

### TREES

| SYMBOL | SPECIES | QUANTITY | SIZE |
|---|---|---|---|
| RB | RIVER BIRCH (BETULA OCCIDENTALIS) | 6 | 2.5" CALIPER |
| GK | GINKO (GINGKO BILOBA) | 2 | 2.5" CALIPER |
| L | LITTLE LEAF LINDEN (TILIA CORDATA) | 2 | 4.5" CALIPER |

### SHRUBS

| SYMBOL | SPECIES | QUANTITY | SIZE |
|---|---|---|---|
| HC | HINOKI CYPRESS (CHAMAECYPARIS OBTUSA) | 6 | 2.5" CALIPER |
| CS | DOGWOOD (CORNUS SERICCA) | 9 | 2.5" CALIPER |
| SP | SPIREA (SPIRAEA SALICIFOLIA) | 6 | 4.5" CALIPER |

FRAMINGHAM PLANNING BOARD
SITE PLAN REVIEW

DATE:

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# PROPOSED LAYOUT PLAN

#71 BISHOP STREET
IN
FRAMINGHAM, MASS

PREPARED FOR:
HERB CHAMBERS COMPANIES
259 McGRATH HIGHWAY
SOMERVILLE, MA 02143

PROPERTY OF:
CLINTON 100 CPI, LLC
43 BROAD ST
HUDSON, MA 01749

ENGINEERS & SURVEYORS:
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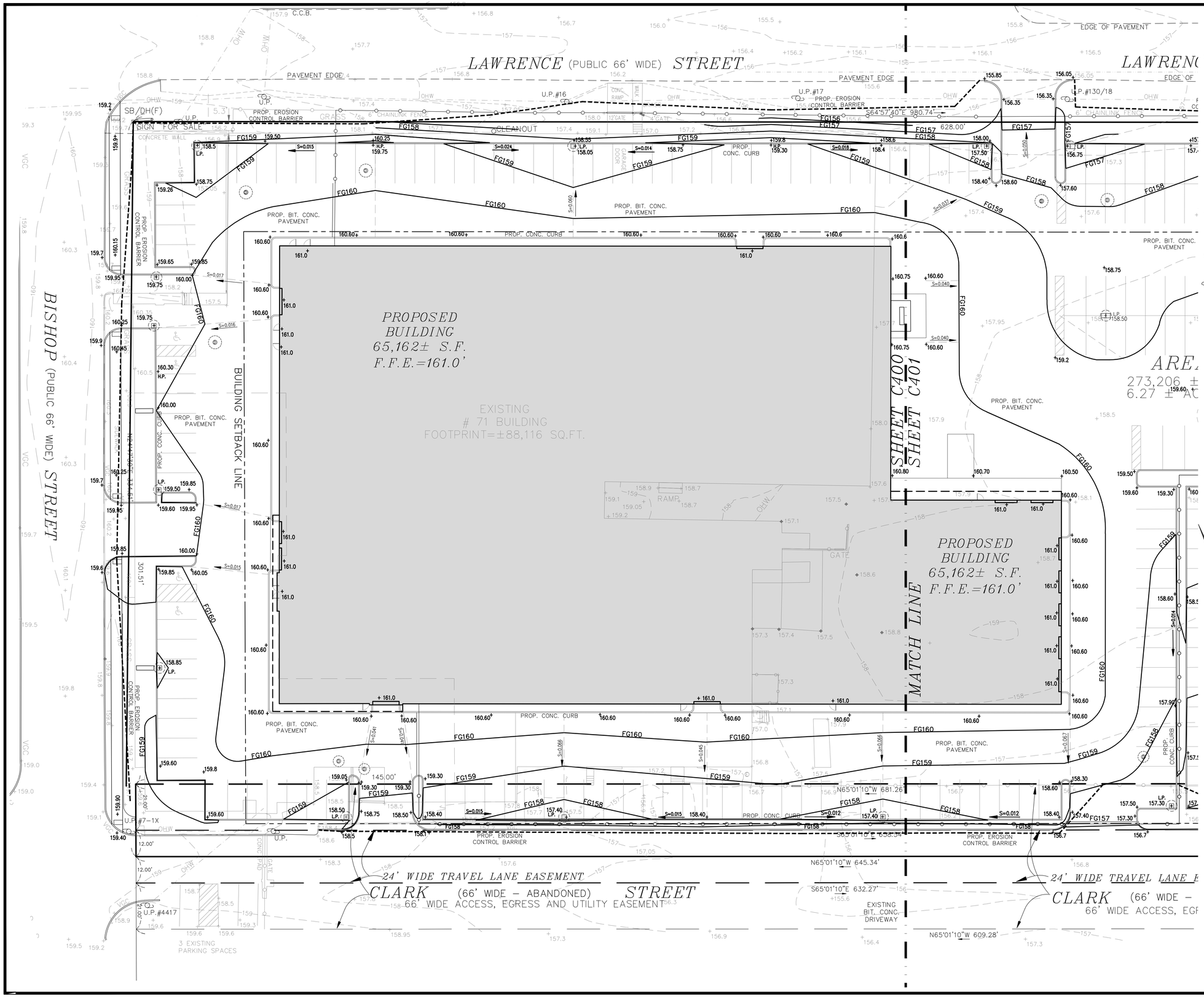
75 FRANKLIN STREET
FRAMINGHAM, MA 01702
TEL.: (508)626–0063
FAX: (508)875–6440

| | | |
|---|---|---|
| SHEET C300 | | DATE: NOVEMBER 30, 2015 |
| CALC'D BY: BTN/RAG | FIELD BK: 632 | CAD FILE: PROP_SP2.dwg |
| DRAFTER: BTN | PROJECT: FRM_CLI | DWG FILE: SP113015.dwg |




## NOTES:

1. SUBJECT PARCEL IS SHOWN AS ASSESSORS MAP 84, BLOCK 165 LOT 04. RECORD TITLE FROM BOOK 64092, PAGE 318.
2. UTILITY LOCATIONS DEPICTED ON THIS PLAN, BOTH ABOVE- AND BELOW-GROUND, ARE BASED UPON DIRECT FIELD OBSERVATIONS MADE BY METROWEST ENGINEERING, INC. PERSONNEL DURING A FIELD SURVEY, RECORD PLAN LOCATIONS, OR DIGSAFE PAINT-INDICATORS. METROWEST ENGINEERING, INC. DOES NOT WARRANT THAT ALL UTILITIES ARE SHOWN OR THAT UTILITIES THAT ARE DEPICTED ARE SHOWN IN THE CORRECT LOCATION, OR WITH THE PROPER MATERIAL DESIGNATION. METROWEST ENGINEERING, INC. DOES NOT WARRANT OR PROVIDE AN EXPRESS OR IMPLIED WARRANTY THAT ALL SUBSURFACE IMPROVEMENTS ARE SHOWN OR ARE SHOWN CORRECTLY, INCLUDING, BUT NOT LIMITED TO, UTILITIES, UNDERGROUND VAULTS, UNDERGROUND TANKS OR CHAMBERS, BUNKERS, DUCT BANKS, AND/OR OTHER MAN-MADE IMPROVEMENTS THAT LIE BENEATH THE GROUND SURFACE AT THE TIME OF THE SURVEY.
3. CONTRACTOR IS SOLELY RESPONSIBLE FOR ESTABLISHING EXISTING LOCATIONS OF ALL SUB-SURFACE UTILITIES AND MAN-MADE IMPROVEMENTS AND FOR THE REQUIREMENTS TO REPLACE, RELOCATE OR REPAIR EXISTING UTILITIES IN THE EVENT OF DAMAGE OCCURRING DURING CONSTRUCTION. MWE IS NOT RESPONSIBLE OR LIABLE FOR DELAYS OR COSTS ASSOCIATED WITH REMOVING/REPLACING/RELOCATING OF EXISTING UTILITIES REGARDLESS OF WHETHER SAID UTILITIES ARE ACCURATELY DEPICTED ON THIS SURVEY.
4. THE PROPERTY DESCRIBED ON THIS SURVEY DOES NOT LIE WITHIN A SPECIAL FLOOD HAZARD AREA AS DEFINED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY; THE PROPERTY LIES WITHIN ZONE "X" OF THE FLOOD INSURANCE RATE MAP IDENTIFIED AS MAPS NUMBER 25017C0518F & 25017C0519F, BEARING AN EFFECTIVE DATE OF JULY 7, 2014.
5. SEE SYMBOL LEGEND ON COVER SHEET.

DIG SAFE 811

CONTRACTOR TO VERIFY ACTUAL LOCATION OF EXISTING UTILITY SERVICES IN THE FIELD PRIOR TO CONSTRUCTION (WATER, ELECTRICAL, ETC.) CALL DIG-SAFE BEFORE YOU DIG 811.

FRAMINGHAM PLANNING BOARD
SITE PLAN REVIEW

DATE:

THE ENDORSEMENT OF THE PLANNING BOARD SHOULD NOT BE CONSTRUED TO BE A DETERMINATION OF CONFORMANCE WITH ZONING REGULATIONS.

FOR METROWEST ENGINEERING, INC. DATE
ROBERT A. GEMMA, P.E.(CIVIL) # 31967
P.L.S. # 37046

GRAPHIC SCALE
1 inch = 20 ft.
( FEET ) 20 0 10 20 40 80
( METERS ) 4 10 20 30

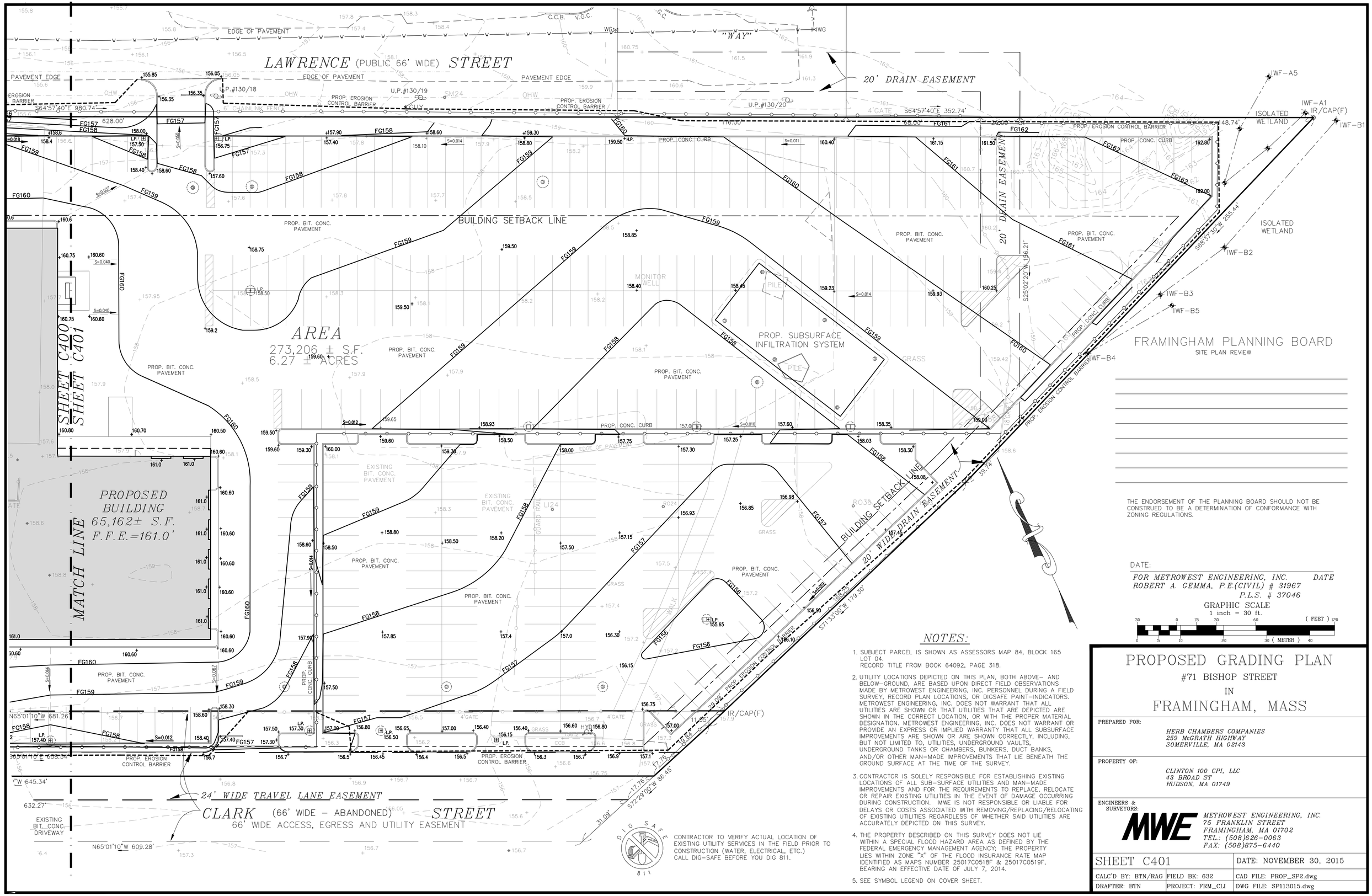
# PROPOSED GRADING PLAN
#71 BISHOP STREET
IN
FRAMINGHAM, MASS

PREPARED FOR:
HERB CHAMBERS COMPANIES
259 McGRATH HIGHWAY
SOMERVILLE, MA 02143

PROPERTY OF:
CLINTON 100 CPI, LLC
43 BROAD ST
HUDSON, MA 01749

ENGINEERS & SURVEYORS:
MWE
METROWEST ENGINEERING, INC.
75 FRANKLIN STREET
FRAMINGHAM, MA 01702
TEL.: (508)626-0063
FAX: (508)875-6440

| | | |
|---|---|---|
| SHEET C400 | | DATE: NOVEMBER 30, 2015 |
| CALC'D BY: BTN/RAG | FIELD BK: 632 | CAD FILE: PROP_SP2.dwg |
| DRAFTER: BTN | PROJECT: FRM_CLI | DWG FILE: SP113015.dwg |




FRAMINGHAM PLANNING BOARD
SITE PLAN REVIEW

THE ENDORSEMENT OF THE PLANNING BOARD SHOULD NOT BE CONSTRUED TO BE A DETERMINATION OF CONFORMANCE WITH ZONING REGULATIONS.

DATE:

*FOR METROWEST ENGINEERING, INC.* *DATE*
*ROBERT A. GEMMA, P.E.(CIVIL) # 31967*
*P.L.S. # 37046*

GRAPHIC SCALE
1 inch = 30 ft.

30 0 15 30 60 ( FEET ) 120
0 5 10 20 30 ( METER ) 40

CONTRACTOR TO VERIFY ACTUAL LOCATION OF EXISTING UTILITY SERVICES IN THE FIELD PRIOR TO CONSTRUCTION (WATER, ELECTRICAL, ETC.) CALL DIG-SAFE BEFORE YOU DIG 811.

## NOTES:

1. SUBJECT PARCEL IS SHOWN AS ASSESSORS MAP 84, BLOCK 165 LOT 04.
   RECORD TITLE FROM BOOK 64092, PAGE 318.
2. UTILITY LOCATIONS DEPICTED ON THIS PLAN, BOTH ABOVE- AND BELOW-GROUND, ARE BASED UPON DIRECT FIELD OBSERVATIONS MADE BY METROWEST ENGINEERING, INC. PERSONNEL DURING A FIELD SURVEY, RECORD PLAN LOCATIONS, OR DIGSAFE PAINT-INDICATORS. METROWEST ENGINEERING, INC. DOES NOT WARRANT THAT ALL UTILITIES ARE SHOWN OR THAT UTILITIES THAT ARE DEPICTED ARE SHOWN IN THE CORRECT LOCATION, OR WITH THE PROPER MATERIAL DESIGNATION. METROWEST ENGINEERING, INC. DOES NOT WARRANT OR PROVIDE AN EXPRESS OR IMPLIED WARRANTY THAT ALL SUBSURFACE IMPROVEMENTS ARE SHOWN OR ARE SHOWN CORRECTLY, INCLUDING, BUT NOT LIMITED TO, UTILITIES, UNDERGROUND VAULTS, UNDERGROUND TANKS OR CHAMBERS, BUNKERS, DUCT BANKS, AND/OR OTHER MAN-MADE IMPROVEMENTS THAT LIE BENEATH THE GROUND SURFACE AT THE TIME OF THE SURVEY.
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5. SEE SYMBOL LEGEND ON COVER SHEET.

# PROPOSED GRADING PLAN

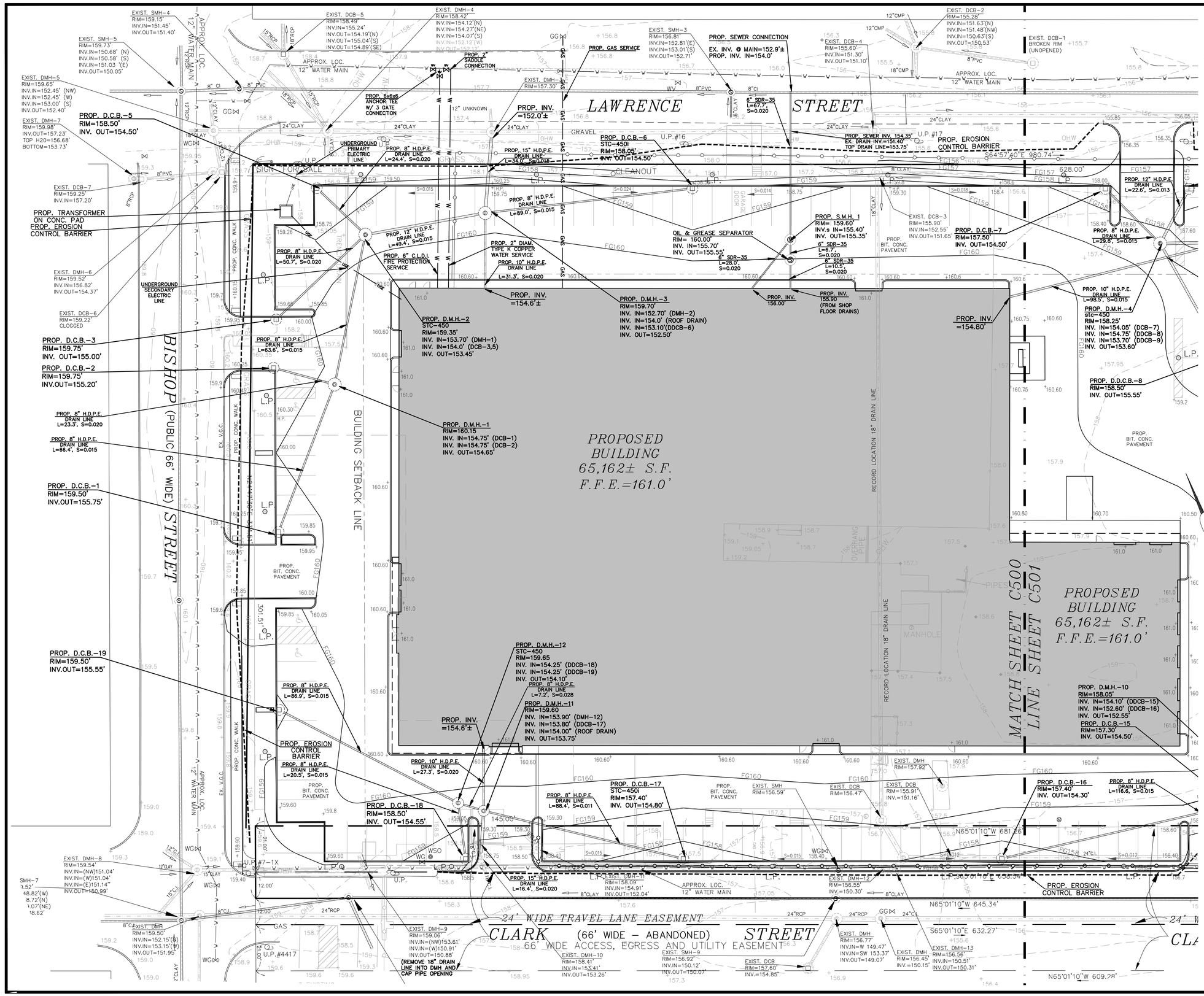
#71 BISHOP STREET
IN
FRAMINGHAM, MASS

PREPARED FOR:
*HERB CHAMBERS COMPANIES*
*259 McGRATH HIGHWAY*
*SOMERVILLE, MA 02143*

PROPERTY OF:
*CLINTON 100 CPI, LLC*
*43 BROAD ST*
*HUDSON, MA 01749*

ENGINEERS & SURVEYORS:
MWE
*METROWEST ENGINEERING, INC.*
*75 FRANKLIN STREET*
*FRAMINGHAM, MA 01702*
*TEL.: (508)626-0063*
*FAX: (508)875-6440*

| | | |
|---|---|---|
| SHEET C401 | | DATE: NOVEMBER 30, 2015 |
| CALC'D BY: BTN/RAG | FIELD BK: 632 | CAD FILE: PROP_SP2.dwg |
| DRAFTER: BTN | PROJECT: FRM_CLI | DWG FILE: SP113015.dwg |

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FRAMINGHAM PLANNING BOARD
SITE PLAN REVIEW

DATE:

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FOR METROWEST ENGINEERING, INC. DATE
ROBERT A. GEMMA, P.E.(CIVIL) # 31967
P.L.S. # 37046

GRAPHIC SCALE
1 inch = 20 ft.
( FEET ) 20 0 10 20 40 80
( METERS ) 0 4 10 20 30

# PROPOSED SITE PLAN
## #71 BISHOP STREET
## IN
## FRAMINGHAM, MASS

PREPARED FOR:
HERB CHAMBERS COMPANIES
259 McGRATH HIGHWAY
SOMERVILLE, MA 02143

PROPERTY OF:
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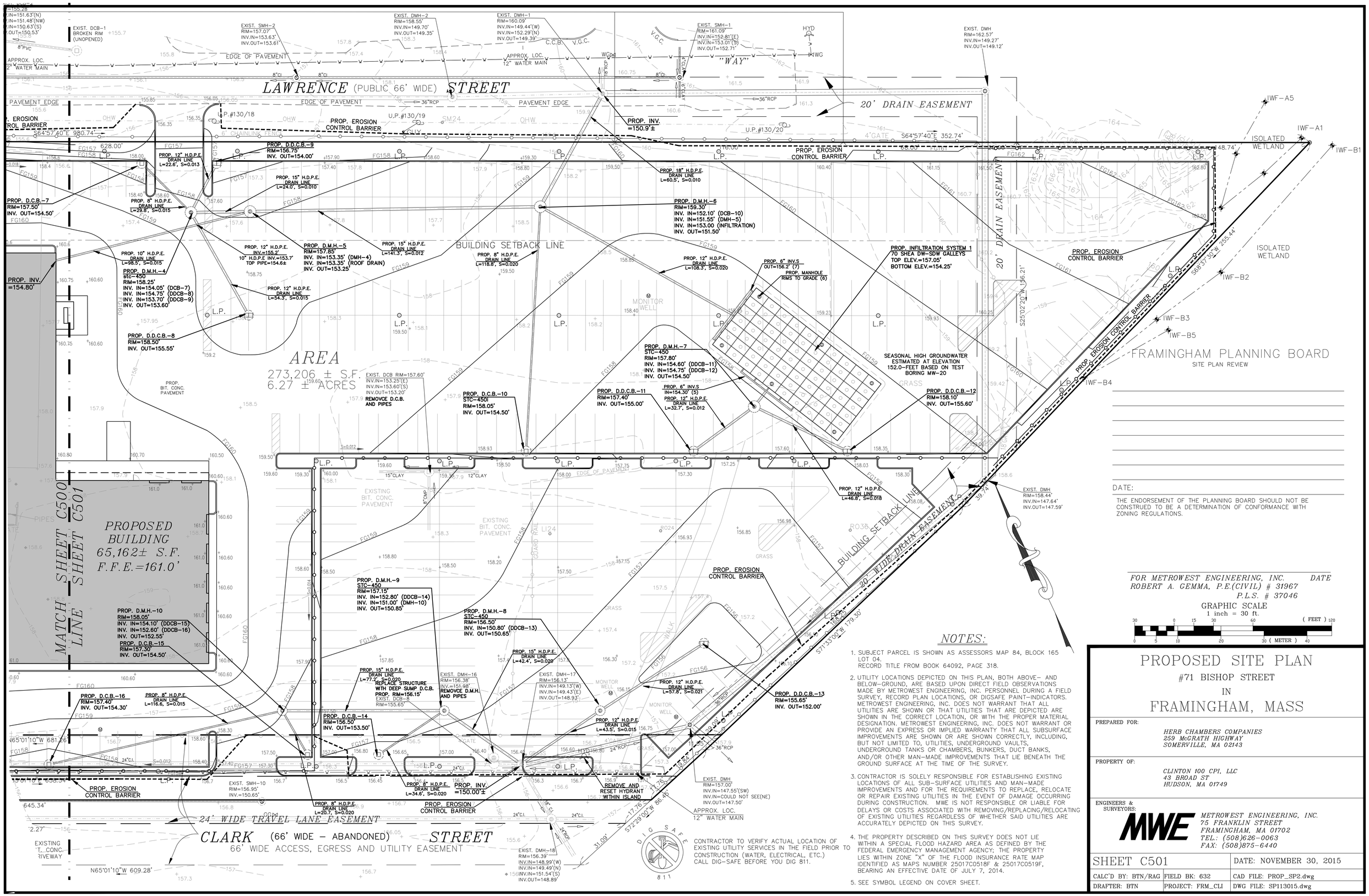
43 BROAD ST
HUDSON, MA 01749

ENGINEERS & SURVEYORS:
MWE
METROWEST ENGINEERING, INC.
75 FRANKLIN STREET
FRAMINGHAM, MA 01702
TEL.: (508)626–0063
FAX: (508)875–6440

| | | |
|---|---|---|
| SHEET C500 | | DATE: NOVEMBER 30, 2015 |
| CALC'D BY: BTN/RAG | FIELD BK: 632 | CAD FILE: PROP_SP2.dwg |
| DRAFTER: BTN | PROJECT: FRM_CLI | DWG FILE: SP113015.dwg |




# PROPOSED SITE PLAN

#71 BISHOP STREET

IN

FRAMINGHAM, MASS

PREPARED FOR:

*HERB CHAMBERS COMPANIES*
*259 McGRATH HIGHWAY*
*SOMERVILLE, MA 02143*

PROPERTY OF:

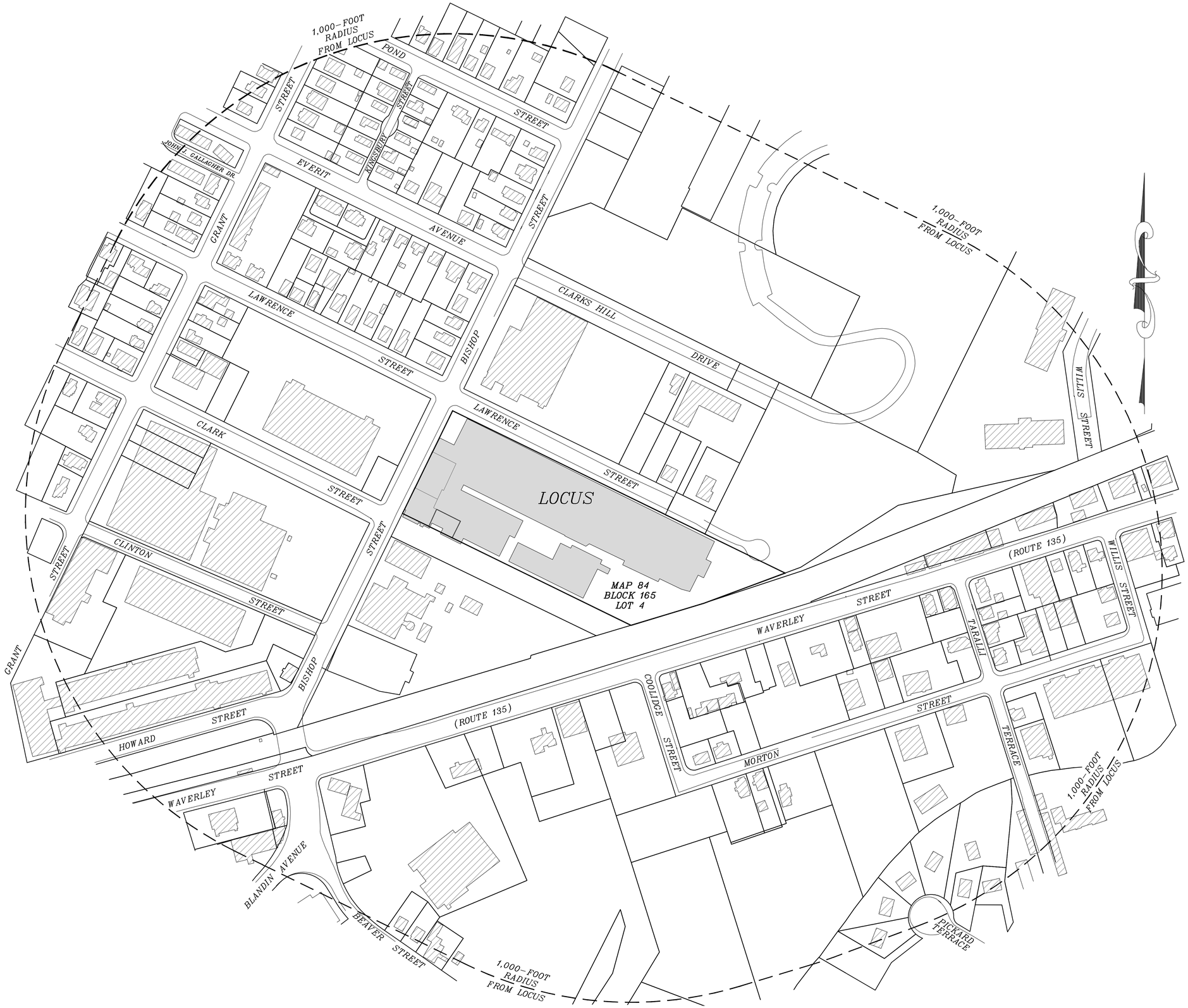
*CLINTON 100 CPI, LLC*
*43 BROAD ST*
*HUDSON, MA 01749*

ENGINEERS & SURVEYORS:

MWE

*METROWEST ENGINEERING, INC.*
*75 FRANKLIN STREET*
*FRAMINGHAM, MA 01702*
*TEL.: (508)626-0063*
*FAX: (508)875-6440*

| | | |
|---|---|---|
| SHEET C501 | | DATE: NOVEMBER 30, 2015 |
| CALC'D BY: BTN/RAG | FIELD BK: 632 | CAD FILE: PROP_SP2.dwg |
| DRAFTER: BTN | PROJECT: FRM_CLI | DWG FILE: SP113015.dwg |

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FRAMINGHAM PLANNING BOARD
SITE PLAN REVIEW

DATE:

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*FOR METROWEST ENGINEERING, INC.* *DATE*
*ROBERT A. GEMMA, P.L.S. #37046*

GRAPHIC SCALE
1 inch = 120 ft.
120 0 60 120 240 ( FEET ) 480
0 20 40 80 120 ( METER ) 160

# LOCUS PLAN
## #71 BISHOP STREET
## IN
## FRAMINGHAM, MASS

PREPARED FOR:
*HERB CHAMBERS COMPANIES*
*259 McGRATH HIGHWAY*
*SOMERVILLE, MA 02143*

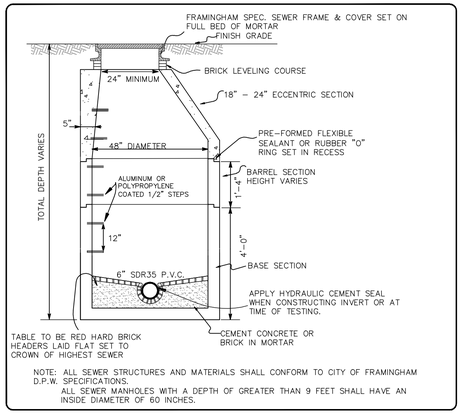
PROPERTY OF:
*CLINTON 100 CPI, LLC*
*43 BROAD ST*
*HUDSON, MA 01749*

ENGINEERS & SURVEYORS:
MWE
*METROWEST ENGINEERING, INC.*
*75 FRANKLIN STREET*
*FRAMINGHAM, MA 01702*
*TEL.: (508)626-0063*
*FAX: (508)875-6440*

| | | |
|---|---|---|
| SHEET C600 | | DATE: NOVEMBER 30, 2015 |
| CALC'D BY: BTN/RAG | FIELD BK: 632 | CAD FILE: PROP_SP2.dwg |
| DRAFTER: BTN | PROJECT: FRM_CLI | DWG FILE: SP113015.dwg |

## PRECAST CONCRETE SEWER MANHOLE

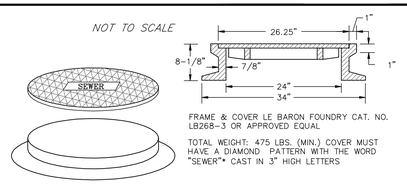
NOT TO SCALE




NOTE: ALL SEWER STRUCTURES AND MATERIALS SHALL CONFORM TO CITY OF FRAMINGHAM D.P.W. SPECIFICATIONS.
ALL SEWER MANHOLES WITH A DEPTH OF GREATER THAN 9 FEET SHALL HAVE AN INSIDE DIAMETER OF 60 INCHES.

## SEWER MANHOLE FRAME AND COVER

NOT TO SCALE

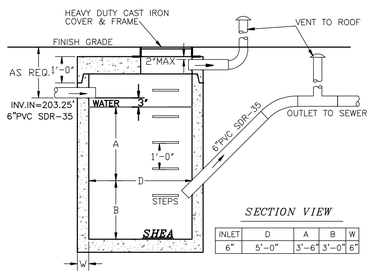



FRAME & COVER LE BARON FOUNDRY CAT. NO. LB268-3 OR APPROVED EQUAL

TOTAL WEIGHT: 475 LBS. (MIN.) COVER MUST HAVE A DIAMOND PATTERN WITH THE WORD "SEWER"* CAST IN 3" HIGH LETTERS

## OIL & GAS SEPARATOR

NOT TO SCALE

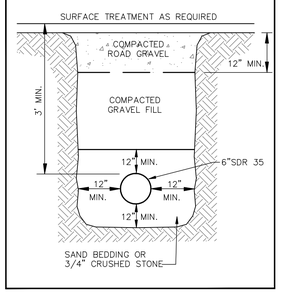



| INLET | D | A | B | W |
|---|---|---|---|---|
| 6" | 5'-0" | 3'-6" | 3'-0" | 6" |

NOTE :
1. CONCRETE : 4,000 PSI MINIMUM AFTER 28 DAYS.
2. MANHOLE DESIGN SPECIFICATIONS CONFORM TO LATEST ASTM C478 SPEC FOR "PRECAST REINFORCED CONCRETE MANHOLE SECTION".
3. BUTYL RESIN SECTION JOINT CONFORMS TO LATEST ASTM C443 SPEC.
4. STEEL REINFORCED COPOLYMER POLYPROLENE PLASTIC STEP CONFORM TO LATEST ASTM C478 SPEC.
5. PIPE NOT SUPPLIED.
6.0 CONE SECTION AVAILABLE IN 4'-0" I.D. ONLY.
7. FOR INLETS LARGER THAN 10" THE DESIGN & DIMENSIONWILL BE DETERMINED FOR EACH PARTICULAR CASE.

## TYPICAL SEWER TRENCH

NOT TO SCALE




## SEWER SYSTEM MATERIALS AND INSTALLATION

1) ALL MATERIALS AND CONSTRUCTION METHODS SHALL COMPLY WITH THE TOWN OF FRAMINGHAM DEPARTMENT OF PUBLIC WORKS CONSTRUCTION STANDARDS.

2.) ALL PIPE AND OTHER APPURTENANCES SHALL BE HANDLED CAREFULLY AND INSPECTED PRIOR TO INSTALLATION.

3.) POLYVINYL CHLORIDE PIPE AND FITTINGS (P.V.C.) SHALL BE MINIMUM SDR 35 WITH DIAMETER DIMENSIONS CONFORMING TO SPECIFICATIONS FOR TYPE PSM P.V.C. SEWER PIPES AND FITTINGS, ASTM D-3034, LATEST REVISION.

4.) ALL P.V.C. PIPE SHALL HAVE AN INTEGRAL WALL BELL AND SPIGOT PUSH-ON JOINT WITH ELASTOMERIC GASKETS SECURED IN THE BELL END OF THE PIPE. ELASTOMERIC GASKETS SHALL CONFORM TO ASTM D3212.

5.) SPIGOT ENDS SHALL HAVE BEVELS FROM THE MANUFACTURER TO ENSURE PROPER INSERTION AND SHALL HAVE AN ASSEMBLY STRIP IMPRINTED THEREUN TO WHICH THE BELL END OF THE MATED PIPE WILL EXTEND UPON JOINING THE PIPES.

6.) ALL PRECAST CONCRETE MANHOLS SHALL CONFORM TO ASTM DESIGNATION D478 AND SHALL BE MANUFACTURED WITH 4,000 P.S.I. (MINIMUM) COMPRESSIVE STRENGTH CONCRETE AND BE DESIGNED FOR HS-20 LOADING REQUIREMENTS.

7.) PRECAST SECTIONS SHALL BE JOINED BY BUTYL RUBBER SEALANT.

8.) MANHOLE FRAMES AND COVERS SHALL HAVE A MINIMUM CLEAR OPENING OF 24-INCHES AND BE A MINIMUM OF SIX-INCHES (6") IN HEIGHT.

9.) MANHOLE FRAMES AND COVERS SHALL BE MANUFACTURED BY EAST JORDAN IRON WORKS (FORMERLY LEBARON FOUNDRY) AND CONSIST OF 2111Z FRAME AND 2111A SEWER COVER.

10.) FRAMES SHALL BE ADJUSTED TO FINISH GRADE WITH MORTAR AND HARD RED BRICK; MINIMUM OF TWO COURSES AND MAXIMUM OF FIVE COURSES OF BRICK.

11.) GRAVITY SERVICE CONNECTION SHALL BE A MINIMUM OF SIX-INCH DIAMETER SDR 35 SEWER PIPE AND SHALL HAVE A MINIMUM SLOPE OF ONE-PERCENT (1.0%).

12.) ALL SERVICE CONNECTIONS TO THE SEWER MAIN SHALL BE MADE BY WYES, T-WYES OR SADDLE TYPE CONNECTIONS.

13.) PIPE SHALL BE LAID ACCURATELY TO LINE AND GRADE IN APPROVED BEDDING OR 3/4" CRUSHED STONE. BEDDING SHALL EXTEND NO LESS THAN SIX-INCHES (6") AROUND THE PIPE IN ALL DIRECTIONS,

14.) BEDDING MATERIAL SHALL BE COMPACTED BY HAND UNDER AND AROUND THE SEWER PIPE IN LAYERS NOT EXCEEDING SIX-INCHES (6").

14.) SEWER PIPE SHALL BE LAID AT LEAST TEN-FEET (10') FROM A WATER MAIN WHENEVER POSSIBLE.

15.) ALL SEWER PIPES SHALL BE CUT FLUSH WITH THE INSIDE FACE OF MANHOLE STRUCTURES UNLESS NOTED OTHERWISE ON DRAWINGS.

16.) THE CONTRACTOR SHALL PROVIDE TEMPORARY PLUGS AT ENDS OF SEWER LINES TO PREVENT THE ACCUMULATION OF DIRT OR SEDIMENT IN SEWER PIPES WHEN PIPE LAYING OPERATIONS ARE NOT IN PROGRESS.

17.) ALL PIPE JOINTS SHALL BE MADE WATERTIGHT AND ALL JOINTING SHALL BE DONE IN CONFORMANCE WITH THE MANUFACTURERS RECOMMENDATIONS.

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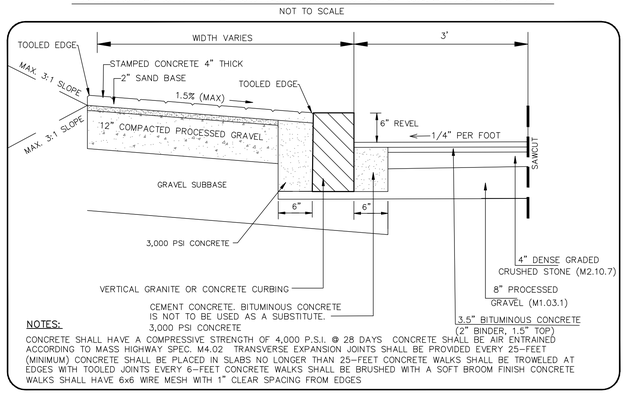
## VERTICAL GRANITE CURB & CONCRETE SIDEWALK DETAIL

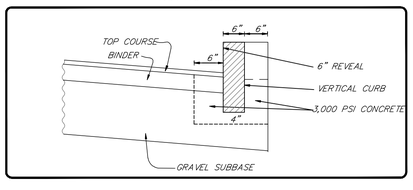
NOT TO SCALE




NOTES:
CONCRETE SHALL HAVE A COMPRESSIVE STRENGTH OF 4,000 P.S.I. @ 28 DAYS CONCRETE SHALL BE AIR ENTRAINED ACCORDING TO MASS HIGHWAY SPEC. M4.02 TRANSVERSE EXPANSION JOINTS SHALL BE PROVIDED EVERY 25-FEET (MINIMUM) CONCRETE SHALL BE PLACED IN SLABS NO LONGER THAN 25-FEET CONCRETE WALKS SHALL BE TROWELED AT EDGES WITH TOOLED JOINTS EVERY 6-FEET CONCRETE WALKS SHALL BE BRUSHED WITH A SOFT BROOM FINISH CONCRETE WALKS SHALL HAVE 6x6 WIRE MESH WITH 1" CLEAR SPACING FROM EDGES

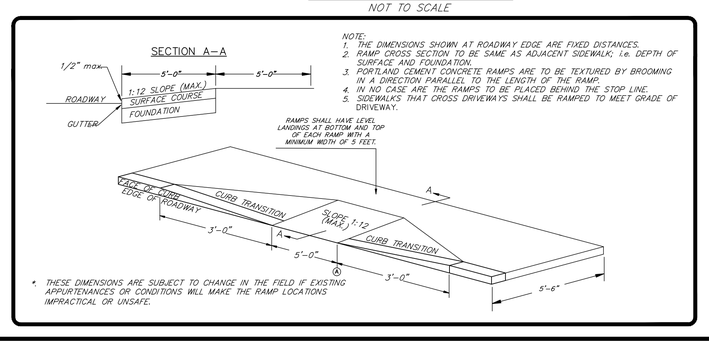
## VERTICAL GRANITE AND CONCRETE CURB

NOT TO SCALE




## CONCRETE RAMP DETAIL

NOT TO SCALE




NOTE:
1. THE DIMENSIONS SHOWN AT ROADWAY EDGE ARE FIXED DISTANCES.
2. RAMP CROSS SECTION TO BE SAME AS ADJACENT SIDEWALK; i.e. DEPTH OF SURFACE AND FOUNDATION.
3. PORTLAND CEMENT CONCRETE RAMPS ARE TO BE TEXTURED BY BROOMING IN A DIRECTION PARALLEL TO THE LENGTH OF THE RAMP.
4. IN NO CASE ARE THE RAMPS TO BE PLACED BEHIND THE STOP LINE.
5. SIDEWALKS THAT CROSS DRIVEWAYS SHALL BE RAMPED TO MEET GRADE OF DRIVEWAY.

* THESE DIMENSIONS ARE SUBJECT TO CHANGE IN THE FIELD IF EXISTING APPURTENANCES OR CONDITIONS WILL MAKE THE RAMP LOCATIONS IMPRACTICAL OR UNSAFE.

## WATER SYSTEM MATERIALS AND INSTALLATION

1) ALL MATERIALS AND CONSTRUCTION METHODS SHALL COMPLY WITH THE TOWN OF FRAMINGHAM DEPARTMENT OF PUBLIC WORKS CONSTRUCTION STANDARDS AND REQUIREMENTS OF THE FRAMINGHAM FIRE DEPARTMENT.

2.) ALL PIPE AND OTHER APPURTENANCES SHALL BE HANDLED CAREFULLY AND INSPECTED PRIOR TO INSTALLATION.

3.) ALL MATERIALS INCLUDING PIPE AND FITTINGS SHALL BE LEAD FREE.

4.) ALL WATER MAINS SHALL BE MINIMUM DUCTILE IRON CLASS 52, SINGLE GASKET, DOUBLE SEALING PIPE WITH CEMENT LINING. ALL DUCTILE IRON PIPE SHALL BE RATED FOR A MINIMUM OPERATING PRESSURE OF 350 P.S.I.

5.) MECHANICAL JOINT RESTRAINTS SHALL CONSIST OF ACTUATED WEDGES THAT INCREASE RESISTANCE TO PULL OUT AS PRESSURE INCREASES.

6.) USE SERIES 1100 MEGA-LUG RESTRAINTS OR APPROVED EQUAL FOR PIPE RESTRAINTS.

7.) PIPE FITTINGS SHALL BE CEMENT LINED DUCTILE IRON AND RATED FOR 350 P.S.I.

8.) PIPE FITTINGS SHALL BE FITTED WITH MECHANICAL JOINT RESTRAINTS WITH ALL NUTS AND BOLTS OF A SIMILAR TYPE DUCTILE IRON OR KOR-10 STEEL T BOLTS AND NUTS.

9.) RESILIENT SEAT GATE VALVES SHALL BE MANUFACTURED OF DUCTILE IRON, OPEN LEFT (COUNTER CLOCKWISE) AND BE DESIGNED FOR A MINIMUM WORKING PRESSURE OF 250 P.S.I.

10.) GATE VALVE BOXES SHALL BE ADJUSTABLE, BUFFALO STYLE, WITH THE LOWER PART MADE OF CAST IRON AND AND THE UPPER PART OF STEEL OR CAST IRON. THE VALVE BOX SHALL BE DESIGNED TO PREVENT DIRECT TRANSMISSION OF TRAFFIC LOADS TO THE VALVE OR PIPE.

11.) HYDRANTS SHALL BE AMERICAN DARLING B-62B AS MANUFACTURED BY AMERICAN FLOW CONTROL INC.

12.) HYDRANTS SHALL HAVE A 5 1/4-INCH VALVE OPENED BY TURNING THE OPERATING UNIT IN THE COUNTER CLOCKWISE DIRECTION. THE HYDRANT SHALL HAVE ONE 4 1/2-INCH STEAMER CONNECTION AND TWO 2 1/2-INCH HOSE CONNECTIONS. ALL CONNECTIONS SHALL HAVE NATIONAL STANDARD THREADS.

13.) THE HYDRANT SHALL HAVE A BRONZE DRAIN RING SECURELY HELD BETWEEN THE BARREL AND THE BASE FLANGE. IT SHALL PROVIDE BRONZE TO BRONZE THREADED CONNECTION FOR HYDRANT SEAL.

14) ALL WATER PIPING SHALL BE INSTALLED WITH A MINIMUM OF FIVE-FEET (5') OF COVER. PIPE SHALL BE PROPERLY INSULATED WHEN THE PROPER COVER CAN NOT BE ACHIEVED.

15.) PIPE SHALL BE LAID ACCURATELY TO LINE AND GRADE IN SAND BEDDING (MASSDOT SPEC. M1.04.0, SAND BORROW) IN ACCORDANCE WITH AWWA GUIDELINES.

16.) PUSH-ON PIPE GASKETS SHALL BE CLEAN AND THOROUGHLY COATED WITH LUBRICANT SUPPLIED BY THE MANUFACTURER DURING INSTALLATION.

17.) ALL PIPE LINES SHALL BE PRESSURE TESTED FOR STRENGTH AND LEAKAGE AT A PRESSURE OF 200 P.S.I. BY A QUALIFIED THIRD PARTY.

18.) ALLOWABLE LEAKAGE AMOUNTS DURING TESTING SHALL CONFORM TO AWWA STANDARDS FOR PRESSURE TESTING DUCTILE IRON PIPE (AWWA C600.)

19.) ALL NEW HYDRANT LATERALS SHALL BE LEFT IN THE OPEN POSITION DURING TESTING.

20.) CONTRACTOR SHALL REPAIR ANY LEAKS DISCOVERED UNDER ANY OF THE REQUIRED TESTS AND RETEST PIPES IF NECESSARY.

21.) CONTRACTOR SHALL SUBMIT A DETAILED DISINFECTION PLAN TO THE FRAMINGHAM D.P.W. AND WATER SUPERINTENDENT AND SHALL NOT BEGIN DISINFECTION UNTIL THE PLAN HAS BEEN APPROVED BY THE FRAMINGHAM D.P.W.

22.) THE DISINFECTION PLAN SHALL INCLUDE THE INTENDED CHLORINE DOSAGE, METHOD FOR ESTABLISHING DOSAGE AND LOCATIONS FOR APPLICATION OF DOSAGE.

23.) THE CONTACT PERIOD FOR DISINFECTION SHALL BE AT LEAST 24-HOURS.

24.) THE PIPELINE SHALL BE ADEQUATELY FLUSHED WITH POTABLE WATER FOR THE DE-CHLORINATION OF RESIDUAL CHLORINATED WATER.

## PAVEMENT AND BASE MATERIALS AND INSTALLATION

1) ALL MATERIALS AND CONSTRUCTION METHODS SHALL COMPLY WITH THE TOWN OF FRAMINGHAM DEPARTMENT OF PUBLIC WORKS CONSTRUCTION STANDARDS.

2.) BITUMINOUS PAVING SHALL NOT BE PLACED WHEN AMBIENT TEMPERATURE IS BELOW 40-DEGREES FAHRENHEIT, OR WHEN THERE IS FROST IN THE BASE, OR WHEN WEATHER CONDITIONS ARE UNSUITABLE IN ANY WAY.

3.) CONTRACTOR SHALL SAWCUT ALL EXISTING TRENCHES AND EXCAVATIONS WHEN LOCATED WITHIN LIMITS OF EXISTING PAVEMENT. PAVEMENT BREAKER MAY BE USED FOR INITIAL EXCAVATION AND A SAWCUT MAY BE EMPLOYED TO PROVIDE NEATER CUT FOR TRENCH PRIOR TO PLACEMENT OF NEW PAVEMENT.

4.) SAWCUTS SHALL EXTEND COMPLETELY THROUGH BINDER AND TOP COURSE LAYERS.

5.) PAVEMENT EDGES SHALL BE TRIMMED AND CLEANED FOR A NEAT VERTICAL FACE FREE OF LOOSE MATERIALS AND DEBRIS.

6.) CONTRACTOR SHALL EXERCISE CARE TO PREVENT OR MINIMIZE DAMAGE TO EXISTING PAVEMENT SURROUNDING EXCAVATION WORK.

7.) BACKFILL IN TRENCHES SHALL BE IN ACCORDANCE WITH SPECIFIC UTILITY TRENCH REQUIREMENTS. BACKFILL MATERIAL IN TRENCHES SHALL CONSIST OF GRANULAR GRAVEL BORROW, PROCESSED GRAVEL, SAND OR CRUSHED STONE MATERIAL. BACKFILL MATERIAL SHALL BE PLACED AND COMPACTED IN LAYERS NOT EXCEEDING 12-INCH LIFTS AND COMPACTED TO NOT LESS THAN 95% OF THE MAXIMUM DRY DENSITY AS DETERMINED BY AASHTO DESIGNATION T99 COMPACTION TEST METHODS.

8.) BROKEN PAVEMENT, LARGE STONES, ROOTS AND OTHER DEBRIS SHALL NOT BE USED IN TRENCH BACKFILL

9.) PERMANENT PAVEMENT SHALL CONSIST OF A TOP COURSE LAYER OF NOT LESS THAN TWO-INCHES (2") AND A BINDER COURSE LAYER OF NOT LESS THAN THREE-INCHES (3") AFTER COMPACTION. PAVEMENT SHALL BE MIXED IN ACCORDANCE WITH MASSDOT SPECIFICATION SECTION M3.11.03 (TABLE A).

10.) PAVEMENT SHALL BE COMPACTED AND ROLLED BY AN OSCILLATING ROLLER WITH A WEIGHT OF NOT LESS THAN 10-TONS. ROLLER SHALL MAKE AT LEAST FOUR PASSES OVER ALL NEWLY PLACED PAVEMENT.

11.) ROLLER SHALL NOT EXCEED A SPEED OF 3 MILES PER HOUR DURING ROLLING OPERATIONS TO ENSURE PROPER COMPACTION. ANY RIDGES, INDENTATIONS SHALL BE ROLLED ADDITIONALLY UNTIL THEY ARE REMOVED.

12.) GRAVEL BASE MATERIAL SHALL CONSIST OF A LAYER OF EITHER DENSE GRADE CRUSHED STONE COMPLYING WITH REQUIREMENTS OF MASSDOT SECTION M2.01.7 OR GRAVEL BORROW COMPLYING WITH REQUIREMENTS OF MASSDOT SECTION M1.03.0.

13.) BASE MATERIALS SHALL BE PLACED IN LIFTS NOT TO EXCEED EIGHT-INCHES (8") AND COMPACTED TO NOT LESS THAN 95% OF THE MAXIMUM DRY DENSITY IN ACCODANCE WITH AASHTO SPECIFICATION T99.

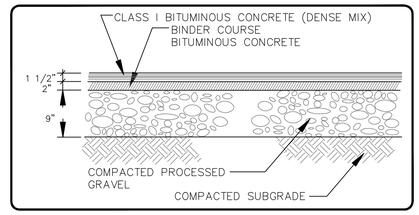
14.) SUITABLE SUBBASE MATERIALS SHALL BE COMPACTED TO NOT LESS THAN 95% OF THE MAXIMUM DRY DENSITY IN ACCORDANCE WITH AASHTO SPECIFICATION T99.

15.) UNSUITABLE SUBBASE MATERIAL SHALL BE REMOVED AND REPLACED WITH MATERIAL IN CONFORMANCE WITH MASSDOT SPECIFICATION M1.02.0, SPECIAL BORROW OR SPECIFICATION M.2.03.0 FOR GRAVEL BORROW.

16.) IMPORTED SUBBASE MATERIAL SHALL BE PLACED IN LIFTS NOT EXCEEDING TWELVE-INCHES AND COMPACTED IN TO NOT LESS THAN 95% OF THE MAXIMUM DRY DENSITY IN ACCORDANCE WITH AASHTO SPECIFICATION T99.

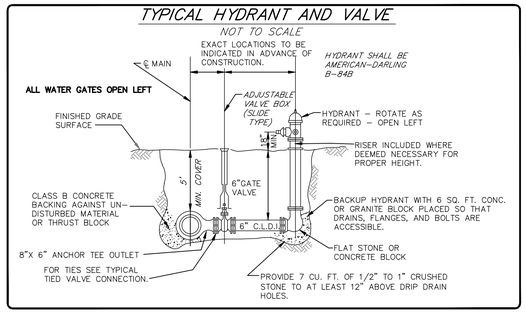
## BITUMINOUS CONCRETE PAVEMENT

NOT TO SCALE



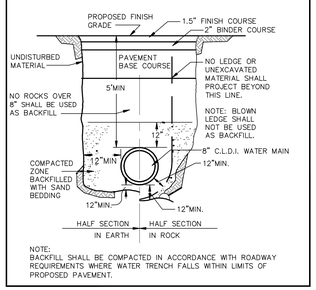

## TYPICAL HYDRANT AND VALVE

NOT TO SCALE




## WATER MAIN TRENCH DETAIL

NOT TO SCALE




NOTE:
BACKFILL SHALL BE COMPACTED IN ACCORDANCE WITH ROADWAY REQUIREMENTS WHERE WATER TRENCH FALLS WITHIN LIMITS OF PROPOSED PAVEMENT.

FRAMINGHAM PLANNING BOARD
SITE PLAN REVIEW UNDER SECTION IV.2.D

DATE:

THE ENDORSEMENT OF THE PLANNING BOARD SHOULD NOT BE CONSTRUED TO BE A DETERMINATION OF CONFORMANCE WITH ZONING REGULATIONS.

*FOR METROWEST ENGINEERING, INC. DATE*
*ROBERT A. GEMMA, P.E. # 31967 (CIVIL)*

# DETAILS PLAN
## #71 BISHOP STREET
## IN
## FRAMINGHAM, MASS

PREPARED FOR:
*HERB CHAMBERS COMPANIES*
*259 McGRATH HIGHWAY*
*SOMERVILLE, MA 02143*

PROPERTY OF:
*CLINTON 100 CPI, LLC*
*43 BROAD ST*
*HUDSON, MA 01749*

ENGINEERS & SURVEYORS:
MWE
*METROWEST ENGINEERING, INC.*
*75 FRANKLIN STREET*
*FRAMINGHAM, MA 01702*
*TEL.: (508)626-0063*
*FAX: (508)875-6440*

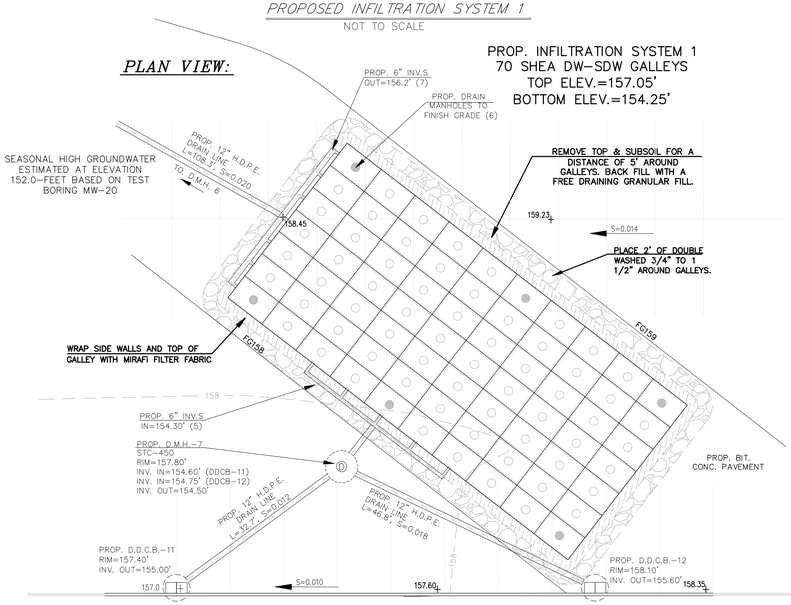
| | | |
|---|---|---|
| SHEET C700 | | DATE: NOVEMBER 30, 2015 |
| CALC'D BY: BTN | FIELD BK: 632 | CAD FILE: PROP_SP2.dwg |
| DRAFTER: JTS/BTN | PROJECT: FRM_CLI | DWG FILE: SP1133015.dwg |

MW_002.DWG

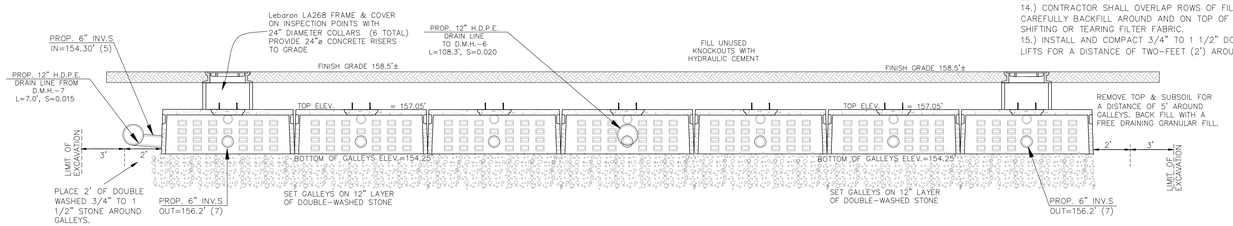
## PROPOSED INFILTRATION SYSTEM 1

NOT TO SCALE

### PLAN VIEW:




### PROFILE VIEW:




## H.D.P.E. DRAIN PIPE MATERIALS AND INSTALLATION

1.) ALL PIPE SHALL CONFORM TO MASSDOT SECTION M5.03.10.
2.) PIPE SHALL BE SMOOTH INTERIOR WALL AND CORRUGATED EXTERIOR WALL AND SHALL BE BELL AND SPIGOT CONNECTION.
3.) PIPE SHALL COMPLY WITH REQUIREMENTS AND MARKINGS FOUND IN AASHTO DESIGNATIONS M252 AND M294.
4.) ALL PIPE SHALL SUPPORT AN HS-20 LIVE LOAD WITH A MAXIMUM DEFLECTION OF 5% OF THE PIPE DIAMETER.
5.) ALL PIPE AND FITTINGS SHALL BE MADE FROM VIRGIN POLYETHYLENE COMPOUNDS WHICH CONFORM TO CURRENT AASHTO CLASSIFICATIONS AND ALSO AS DEFINED IN ASTM D3530.
6.) PIPES SHALL BE CAREFULLY LAID TO LINES AND GRADES AS SHOWN ON DESIGN PLANS.
7.) PIPE BEDDING MATERIAL SHALL BE PLACED TO A DEPTH OF NO LESS THAN SIX-INCHES BELOW THE INVERT OF THE PIPE.
8.) TRENCHES FOR DRAIN LINES SHALL PROVIDE MINIMUM OF TWELVE-INCHES (12") OF HORIZONTAL CLEARANCE FROM SIDES OF PIPE TO EDGE OF TRENCH.
9.) INSTALLATION OF H.D.P.E. PIPE SHALL BE IN ACCORDANCE WITH ASTM D2321 AND AS RECOMMENDED BY THE MANUFACTURER.
10.) WATER TIGHT JOINTS SHALL BE USED ON ALL PIPES IN ACCORDANCE WITH ASTM D3212. PIPE JOINTS SHALL BE BELL AND SPIGOT WITH ELASTOMERIC RUBBER GASKETS MEETING OR EXCEEDING ASTM F477.
11.) PIPE BEDDING MATERIAL OR 3/4" CRUSHED STONE SHALL BE CAREFULLY BACKFILLED AND COMPACTED AROUND PIPE TO A DEPTH OF TWELVE-INCHES ABOVE THE TOP OF PIPE.
12.) MATERIAL FOR BACKFILLING THE REMAINDER OF THE TRENCH, PAVEMENT AND PAVEMENT BASE MATERIAL EXCLUDED, SHALL BE BACKFILLED AND COMPACTED IN TWELVE-INCH LIFTS WITH SUITABLE MATERIAL WITH NO STONES GREATER THAN FOUR-INCHES IN DIAMETER. MATERIAL SHOULD BE FREE OF ORGANICS AND DEBRIS.
13.) TRENCH SHALL BE FINISHED WITH SIX-INCHES (6") OF LOAM AND SEED IN NON PAVED AREAS AND PREPARED IN ACCORDANCE WITH PAVEMENT STRUCTURE IN PAVED AREAS.

## SUBSURFACE INFILTRATION SYSTEM ATERIALS AND INSTALLATION

1.) ALL MATERIALS ASSOCIATED SHALL BE IN ACCORDANCE WITH THE DESIGN PLANS AND THE TOWN OF FRAMINGHAM DEPARTMENT OF PUBLIC WORKS CONSTRUCTION STANDARDS.
2.) SUBSURFACE LEACHING CHAMBERS SHALL BE OLDCASTLE (ROTONDO) G444 GALLEYS OR APPROVED EQUAL.
3.) FILTER FABRIC SHALL BE MIRAFI 140N (TENCATE INDUSTRIES) OR APPROVED EQUAL.
4.) ACCESS MANHOLES SHALL BE REQUIRED AT LOCATIONS SPECIFIED ON DESIGN PLANS.
5.) ACCESS MANHOLES SHALL CONSIST OF EAST JORDAN IRON WORKS 2111Z/2111A, HEAVY DUTY FRAME AND COVER AND SHALL MEET OR EXCEED HS-20 LOADING REQUIREMENTS.
6.) ACCESS MANHOLES SHALL BE ADJUSTED TO FINISH GRADE WITH PRECAST CONCRETE RISERS AND/OR LAYERS OF BRICK AND MORTAR.
7.) EXCAVATION FOR PRECAST LEACHING CHAMBERS SHALL BE DONE CAREFULLY TO AVOID SMEARING AND COMPACTION OF BOTTOM AND EXCAVATION SIDEWALLS.
8.) ANY UNSUITABLE MATERIAL SHALL BE REMOVED AND REPLACED WITH FREE DRAINING MATERIAL, INCLUDING BUT NOT LIMITED TO TITLE V SAND.
9.) ALL PRECAST LEACHING CHAMBERS SHALL BE PLACED ON A TWELVE-INCH (12") DEEP LAYER OF COMPACTED 3/4" TO 1 1/2" DOUBLE WASHED CRUSHED STONE.
10.) PRECAST LEACHING CHAMBERS SHALL BE CAREFULLY PLACED AT THE SAME ELEVATION IN ROWS AND BUTTED TOGETHER SO NO VOIDS EXIST BETWEEN UNITS.
11.) AREAS BETWEEN ROWS OF PRECAST LEACHING CHAMBERS SHALL BE FILLED WITH 3/4" TO 1 1/2" DOUBLE WASHED STONE.
12.) ALL PIPES SHALL BE SECURELY MORTARED IN PLACE TO PROVIDE WATER TIGHT CONNECTIONS.
13.) FILTER FABRIC SHALL BE INSTALLED AROUND THE SIDES, AND ON OF THE PRECAST LEACHING CHAMBERS.
14.) CONTRACTOR SHALL OVERLAP ROWS OF FILTER FABRIC ONE-HALF FOOT (0.5') AND CAREFULLY BACKFILL AROUND AND ON TOP OF THE LEACHING CHAMBERS TO AVOID SHIFTING OR TEARING FILTER FABRIC.
15.) INSTALL AND COMPACT 3/4" TO 1 1/2" DOUBLE WASHED STONE IN TWELVE-INCH (12") LIFTS FOR A DISTANCE OF TWO-FEET (2') AROUND THE PERIMETER OF LEACHING CHAMBERS.

## DRAINAGE MATERIALS NOTES:

## PRECAST CONCRETE DRAIN MANHOLE MATERIALS AND INSTALLATION

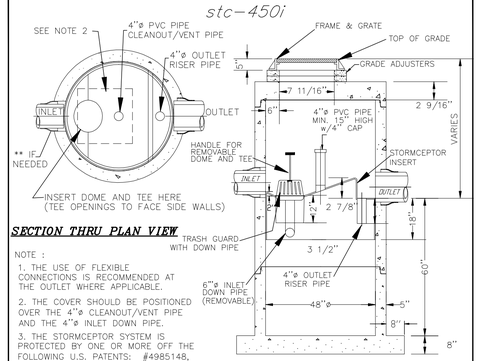
1.) ALL MATERIALS ASSOCIATED SHALL BE IN ACCORDANCE WITH THE DESIGN PLANS, THE TOWN OF FRAMINGHAM DEPARTMENT OF PUBLIC WORKS CONSTRUCTION STANDARDS.
2.) STORMCEPTOR UNITS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS SPECIFICATIONS.
3.)FILTER FABRIC SHALL BE MIRAFI 140N (TENCATE INDUSTRIES) OR APPROVED EQUAL.
4.) MANHOLES SHALL BE CONSTRUCTION OF REINFORCED PRECAST CONCRETE BASE SECTION, BARREL SECTION AND DOME SECTION MEETING THE REQUIREMENTS OF ASTM C78 AND AASHTO M199. CONCRETE SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 4,000 P.S.I.
5.) IN CASES WHERE VERTICAL TOLERANCE DOES NOT PERMIT A CONE TOP SECTION, A PRECAST CONCRETE FLAT SECTION MAY BE USED.
6.) MANHOLES SHALL MEET OR EXCEED HS-20 LOADING REQUIREMENTS.
7.) MANHOLES SHALL HAVE A MINIMUM OPENING OF 26-INCHES AND A MINIMUM INSIDE DIAMETER OF FOUR-FEET (4').
7.) MANHOLES SHALL HAVE TONGUE AND GROOVE JOINTS BETWEEN SECTIONS THAT ARE MORTARED OR SEALED WITH BUTYL RUBBER SEALANTS.
8.) PIPE INLETS AND OUTLETS SHALL BE SEALED WITH MORTAR OR RUBBER SEALANTS OR BOOT TYPE CONNECTIONS.
9.) DRAIN MANHOLES SHALL BE PLACED ON A LAYER OF COMPACTED, LEVEL, BEDDING MATERIAL NOT LESS THAN SIX-INCHES IN HEIGHT.
10.) MANHOLE SECTIONS SHALL BE CAREFULLY PLACED SO THAT ALL SECTIONS ARE LEVEL AND PLUMB.
11.) EXCAVATION AROUND THE MANHOLE STRUCTURES SHALL BE BACKFILLED AND COMPACTED IN TWELVE-INCH (12") LIFTS WITH SUITABLE MATERIALS.
12.) ROAD BASE MATERIAL AND PAVEMENT MATERIALS SHALL BE INSTALLED AROUND STRUCTURES IN ACCORDANCE WITH BASE AND PAVEMENT PREPARATION INSTRUCTIONS.
13.) MANHOLE ACCESS FRAME AND COVER SHALL CONSIST OF EAST JORDAN IRONWORKS 2111A/2111Z FRAME AND COVER.
14.) FRAME AND COVER SHALL BE ADJUSTED TO FINISH GRADE USING LAYERS OF MORTAR AND BRICK.
15.) FRAME AND COVERS SHALL MEET ASTM A888 ANDMADE FROM CLASS 20, GREY CAST IRON.

## PRECAST CONCRETE DRAIN CATCH BASIN MATERIALS AND INSTALLATION

1.) ALL MATERIALS ASSOCIATED SHALL BE IN ACCORDANCE WITH THE DESIGN PLANS, THE TOWN OF FRAMINGHAM DEPARTMENT OF PUBLIC WORKS CONSTRUCTION STANDARDS.
2.) ALL CATCH BASINS SHALL HAVE A SUMP OF AT LEAST FOUR-FEET (48-INCHES) BELOW THE INVERT OF THE OUTLET PIPE AND SHALL HAVE A HOOD ON OUTLET PIPES.
3.) CATCH BASIN HOODS SHALL EXTEND AT LEAST ONE-FOOT BELOW THE INVERT OF THE OUTLET PIPE.
4.) CATCH BASINS SHALL BE CONSTRUCTED OF REINFORCED PRECAST CONCRETE BASE SECTION, BARREL SECTION AND DOME SECTION MEETING THE REQUIREMENTS OF ASTM C78 AND AASHTO M199. CONCRETE SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 4,000 P.S.I.
5.) IN CASES WHERE VERTICAL TOLERANCE DOES NOT PERMIT A CONE TOP SECTION, A PRECAST CONCRETE FLAT SECTION MAY BE USED.
6.) CATCH BASINS SHALL MEET OR EXCEED HS-20 LOADING REQUIREMENTS.
7.) CATCH BASINS SHALL HAVE A MINIMUM OPENING OF 26-INCHES AND A MINIMUM INSIDE DIAMETER OF FOUR-FEET (4').
7.) CATCH BASINS SHALL HAVE TONGUE AND GROOVE JOINTS BETWEEN SECTIONS THAT ARE MORTARED OR SEALED WITH BUTYL RUBBER SEALANTS.
8.) PIPE INLETS AND OUTLETS SHALL BE SEALED WITH MORTAR OR RUBBER SEALANTS OR BOOT TYPE CONNECTIONS.
9.) DRAIN MANHOLES SHALL BE PLACED ON A LAYER OF COMPACTED, LEVEL, BEDDING MATERIAL NOT LESS THAN SIX-INCHES IN HEIGHT.
10.) CATCH BASIN SECTIONS SHALL BE CAREFULLY PLACED SO THAT ALL SECTIONS ARE LEVEL AND PLUMB.
11.) EXCAVATION AROUND THE MANHOLE STRUCTURED SHALL BE BACKFILLED AND COMPACTED IN TWELVE-INCH (12") LIFTS WITH SUITABLE MATERIALS.
12.) ROAD BASE MATERIAL AND PAVEMENT MATERIALS SHALL BE INSTALLED AROUND STRUCTURES IN ACCORDANCE WITH BASE AND PAVEMENT PREPARATION INSTRUCTIONS.
13.) MANHOLE ACCESS FRAME AND COVER SHALL CONSIST OF EAST JORDAN IRONWORKS 5523A/5524Z FRAME AND 5520 M5 COVER.
14.) FRAME AND COVER SHALL BE ADJUSTED TO FINISH GRADE USING LAYERS OF MORTAR AND BRICK.

## STORMCEPTOR

NOT TO SCALE




### SECTION THRU PLAN VIEW

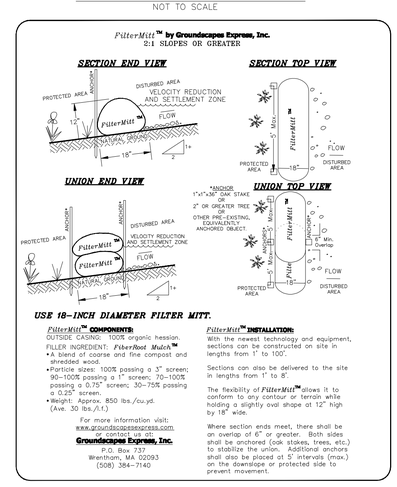
NOTE :

1. THE USE OF FLEXIBLE CONNECTIONS IS RECOMMENDED AT THE OUTLET WHERE APPLICABLE.
2. THE COVER SHOULD BE POSITIONED OVER THE 4"ø CLEANOUT/VENT PIPE AND THE 4"ø INLET DOWN PIPE.
3. THE STORMCEPTOR SYSTEM IS PROTECTED BY ONE OR MORE OFF THE FOLLOWING U.S. PATENTS: #4985148, #5498331, #5725760, #5753115, #5849181.
4. CONTRACTOR TO PROVIDE CRANE TO SET UNIT (HEAVIEST SECTION WEIGHS 5000 LB)

### SECTION THRU CHAMBER

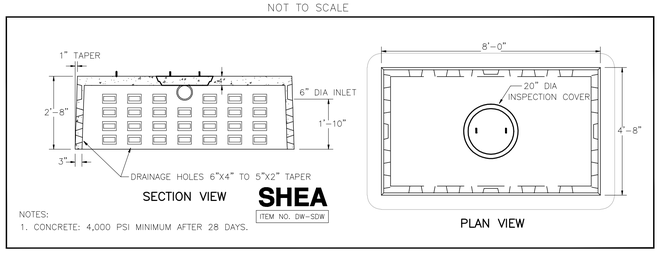
## EROSION CONTROL BARRIER

NOT TO SCALE




## SHEA DW-SDW LEACHING GALLEY DETAIL

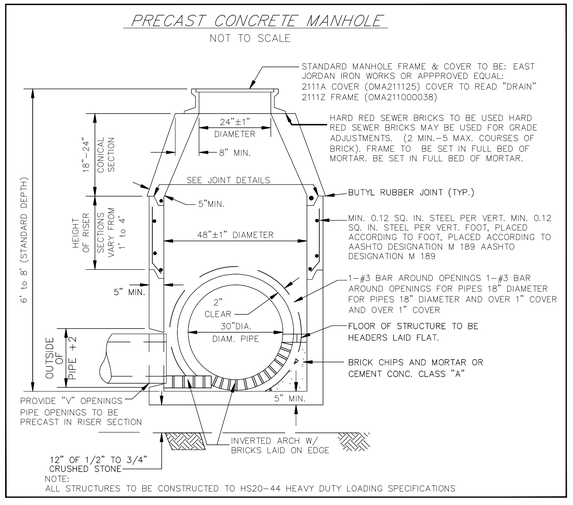
NOT TO SCALE




NOTES:
1. CONCRETE: 4,000 PSI MINIMUM AFTER 28 DAYS.

## PRECAST CONCRETE MANHOLE

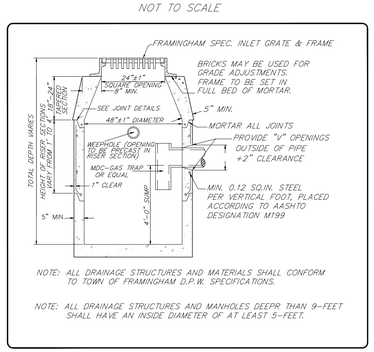
NOT TO SCALE




NOTE:
ALL STRUCTURES TO BE CONSTRUCTED TO HS20-44 HEAVY DUTY LOADING SPECIFICATIONS

## PRECAST CONCRETE CATCH BASIN

NOT TO SCALE

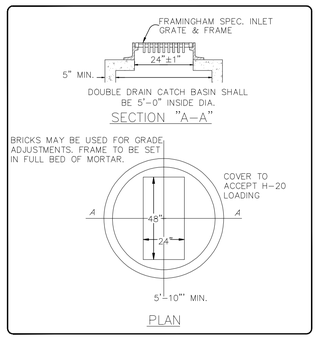



NOTE: ALL DRAINAGE STRUCTURES AND MATERIALS SHALL CONFORM TO TOWN OF FRAMINGHAM D.P.W. SPECIFICATIONS.

NOTE: ALL DRAINAGE STRUCTURES AND MANHOLES DEEPR THAN 9-FEET SHALL HAVE AN INSIDE DIAMETER OF AT LEAST 5-FEET.

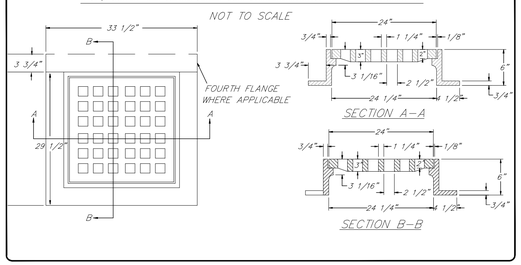
## DOUBLE GRATE CATCH BASIN TOP

NOT TO SCALE




## SQUARE CATCH BASIN FRAME & GRATE

NOT TO SCALE




## FRAMINGHAM PLANNING BOARD

SITE PLAN REVIEW UNDER SECTION IV.2.D

DATE:

THE ENDORSEMENT OF THE PLANNING BOARD SHOULD NOT BE CONSTRUED TO BE A DETERMINATION OF CONFORMANCE WITH ZONING REGULATIONS.

*FOR METROWEST ENGINEERING, INC. DATE*
*ROBERT A. GEMMA, P.E. # 31967 (CIVIL)*

# DETAILS PLAN

#71 BISHOP STREET
IN
FRAMINGHAM, MASS

PREPARED FOR:

*HERB CHAMBERS COMPANIES*
*259 McGRATH HIGHWAY*
*SOMERVILLE, MA 02143*

PROPERTY OF:

*CLINTON 100 CPI, LLC*
*43 BROAD ST*
*HUDSON, MA 01749*

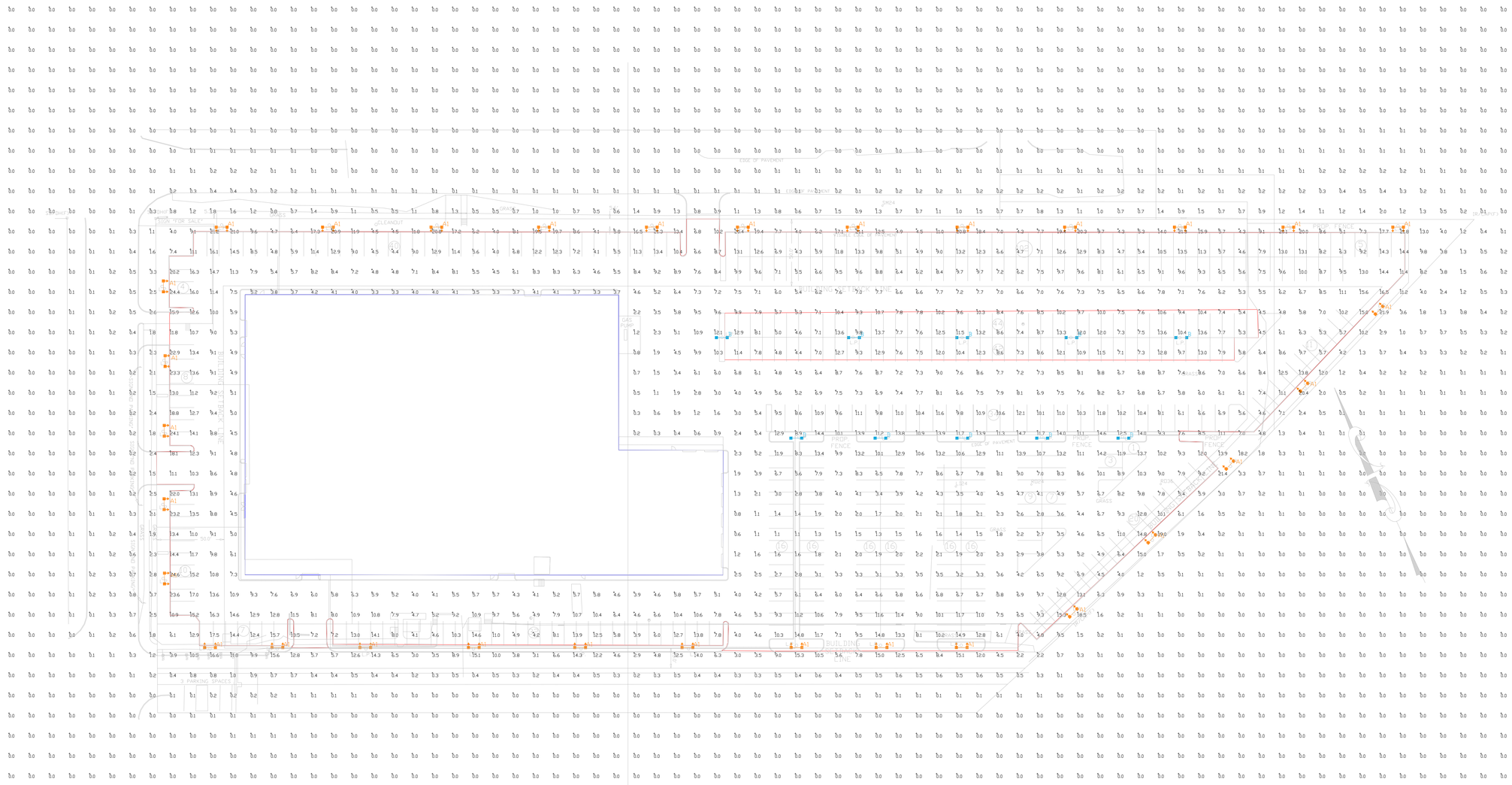
ENGINEERS & SURVEYORS:

MWE

*METROWEST ENGINEERING, INC.*
*75 FRANKLIN STREET*
*FRAMINGHAM, MA 01702*
*TEL.: (508)626-0063*
*FAX: (508)875-6440*

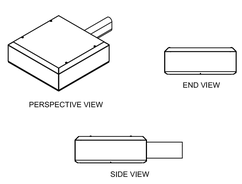
| | | |
|---|---|---|
| SHEET C701 | | DATE: NOVEMBER 30, 2015 |
| CALC'D BY: BTN | FIELD BK: 632 | CAD FILE: PROP_SP2.dwg |
| DRAFTER: JTS/BTN | PROJECT: FRM_CLI | DWG FILE: SP113015.dwg |

MW_002.DWG



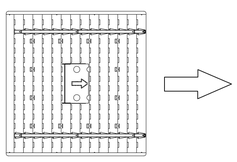

## XGBM

LED Crossover Area Light




Crossover SOLID-STATE LIGHTING

# IMPORTANT



## ROTATED REFLECTOR

NOTE: Reflector MUST be field rotated by the CONTRACTOR to correspond with the direction indicated by the arrows on this layout.

EXAMPLE OF DIRECTIONAL ARROW

| Calculation Summary | | | | | | | |
|---|---|---|---|---|---|---|---|
| Label | CalcType | Units | Avg | Max | Min | Avg/Min | Max/Min |
| ALL CALCS @ 4' ABOVE GRADE | Illuminance | Fc | 2.93 | 24.6 | 0.0 | N.A. | N.A. |
| FRONT LINE TYPICAL | Illuminance | Fc | 15.13 | 24.1 | 10.2 | 1.48 | 2.36 |
| PERIMETER ROW TYPICAL | Illuminance | Fc | 9.75 | 20.2 | 3.8 | 2.57 | 5.32 |
| INTERIOR ROW TYPICAL | Illuminance | Fc | 9.52 | 13.7 | 4.4 | 2.16 | 3.11 |
| LOT SUMMARY | Illuminance | Fc | 8.67 | 24.6 | 0.2 | 43.35 | 123.00 |

| Luminaire Schedule | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Symbol | Qty | Label | Arrangement | Description | LLF | Lumens/Lamp | Arr. Lum. Lumens | Arr. Watts |
| | 31 | A1 | D180° 2RTD | XGBM-FTA-LED-HO-CW-HSS-D180RDT-26' MH | 1.000 | N.A. | 41986 | 575 |
| | 10 | B | D180° | XGBM-5-LED-HO-CW-D180-26' MH | 1.000 | N.A. | 50928 | 600 |

Total Project Watts
Total Watts = 23825

Based on the information provided, all dimensions and luminaire locations shown represent recommended positions. The engineer and/or architect must determine the applicability of the layout to existing or future field conditions.

This lighting plan represents illumination levels calculated from laboratory data taken under controlled conditions in accordance with The Illuminating Engineering Society (IES) approved methods. Actual performance of any manufacturer's luminaires may vary due to changes in electrical voltage, tolerance in lamps/LED's and other variable field conditions. Calculations do not include obstructions such as buildings, curbs, landscaping, or any other architectural elements unless noted.

LSI Industries
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(513) 793-3200 • FAX (513) 793-6003

LIGHTING PROPOSAL LO-130086-2B

FRAMINGHAM SITE
71 BISHOP STREET
FRAMINGHAM, MA

| BY: SMB | DATE: 11/4/15 | REV:11/9/15 | SHEET 1 OF 1 |
|---|---|---|---|

SCALE: 1"=40' 0 40