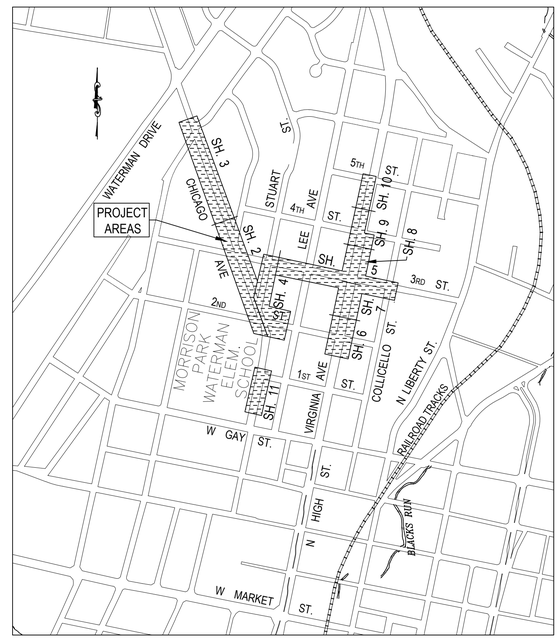
City of Harrisonburg, Virginia

WATERMAN ELEMENTARY SAFE ROUTES TO SCHOOL

MAYOR ..... RICHARD BAUGH
CITY MANAGER ..... KURT HODGEN
CITY ENGINEER ..... DANIEL J. RUBLEE
DIRECTOR OF PUBLIC WORKS ..... JAMES D. BAKER
DIRECTOR OF PUBLIC UTILITIES ... A. MICHAEL COLLINS

LEGEND

- BFP — BACKFLOW PREVENTER, EXISTING
- BFP — BACKFLOW PREVENTER, PROPOSED
- BENCHMARK
- 1400 — CONTOURS, EXISTING
- 1400 — CONTOURS, PROPOSED
- CURB AND GUTTER, EXISTING
- CURB AND GUTTER, PROPOSED
- EDGE OF PAVEMENT, EXISTING
- SHOULDER, EXISTING
- DRAINAGE STRUCTURES, EXISTING
- DRAINAGE STRUCTURES, PROPOSED
- GRATE INLET, PROPOSED
- ELECTRICAL TRANSFORMER/BOX, EXISTING
- ELECTRICAL TRANSFORMER/BOX, PROPOSED
- FENCE LINE, EXISTING
- FENCE LINE, PROPOSED
- FIRE HYDRANT, EXISTING
- FIRE HYDRANT, PROPOSED
- G — GAS LINE, EXISTING
- G — GAS LINE, PROPOSED
- GUARD RAIL, EXISTING
- GUARD RAIL, PROPOSED
- HANDRAIL, PROPOSED
- IRON PIN
- LIGHT, EXISTING
- LIGHT, PROPOSED
- M — MAIL BOX, EXISTING
- M — MAIL BOX, PROPOSED
- MONUMENT
- PROPERTY LINE, EXISTING
- PROPERTY LINE, PROPOSED
- RETAINING WALL, EXISTING
- RETAINING WALL, PROPOSED
- EX. R/W — RIGHT-OF-WAY, EXISTING
- R/W — RIGHT-OF-WAY, PROPOSED
- S — SANITARY SEWER LINE, EXISTING
- S — SANITARY SEWER LINE, PROPOSED
- SANITARY SEWER MANHOLE, EXISTING
- SANITARY SEWER MANHOLE, PROPOSED
- SIGN, EXISTING
- SIGN, PROPOSED
- SIGNAL BOX, EXISTING
- SIGNAL BOX, PROPOSED
- TRAVERSE POINT
- OU — UTILITIES – OVERHEAD, EXISTING
- OU — UTILITIES – OVERHEAD, PROPOSED
- UG — UTILITIES – UNDERGROUND, EXISTING
- UG — UTILITIES – UNDERGROUND, PROPOSED
- UTILITY POLE W/ GUY WIRE, EXISTING
- UTILITY POLE W/ GUY WIRE, PROPOSED
- W — WATER LINE, EXISTING
- W — WATER LINE, PROPOSED
- WATER METER, EXISTING
- DOUBLE WATER METER, EXISTING
- W — WATER METER, PROPOSED
- WV — WATER VALVE, EXISTING
- WV — WATER VALVE, PROPOSED
- SIGNAL POLE, EXISTING
- TEMPORARY CONSTRUCTION EASEMENT



VICINITY SKETCH
SCALE: 1" = 600' +/-

Erosion Control Notes

1. Erosion and sediment control measures shall be installed and maintained in accordance with the Virginia Erosion and Sediment Control Handbook. They shall be maintained continuously, relocated when and as necessary and shall be checked after every rainfall. Seeded areas shall be checked regularly and shall be watered, fertilized, reseeded and mulched as necessary to obtain a dense stand of grass.
2. Permanent or temporary soil stabilization shall be applied to denuded areas within seven days after final grade is reached on any portion of the site. Temporary soil stabilization shall be applied within seven days to denuded areas that may not be at final grade but will remain dormant (undisturbed) for longer than 30 days.
3. During construction of the project, soil stock piles shall be stabilized and protected with sediment trapping measures.
4. A permanent vegetative cover shall be established on denuded areas not otherwise permanently stabilized. Permanent vegetation shall not be considered established until a ground cover is achieved that, in the opinion of the City Erosion Control Administrator or his designated agent, is uniform, mature enough to survive and will inhibit erosion.
5. Erosion and sediment control measures shall be constructed as a first step and shall be installed and made functional before upslope land disturbance takes place.
6. Underground utility lines shall be installed in accordance with the following standards in addition to other applicable criteria:
   a. No more than 500 linear feet of trench may be opened at one time.
   b. Excavated material shall be placed on the uphill side of trenches.
   c. Effluent from dewatering operations shall be filtered or passed through an approved sediment trapping device, and discharged in a manner that does not adversely affect flowing streams or off-site property.
   d. Applicable safety regulations shall be complied with.
7. Where construction vehicle access routes intersect paved public roads, provisions shall be made to minimize the transport of sediment by vehicular tracking onto the paved surface. Where sediment is transported onto a public road surface, the road shall be cleaned thoroughly at the end of each day. Sediment shall be removed from the roads by shoveling or sweeping and transported to a sediment control disposal area. Street washing shall be allowed only after sediment is removed in this manner.
8. All disturbed areas are to drain to approved sediment control measures at all times during land disturbing activities and during site development until final stabilization is achieved.
9. The contractor is responsible for installation of any additional erosion control measures necessary to prevent erosion and sedimentation as determined by the City.
10. All temporary erosion and sediment control measures shall be removed within 30 days after final site stabilization or after the temporary measures are no longer needed, unless otherwise authorized by the City Erosion Control Administrator. Trapped sediment and the disturbed soil areas resulting from the disposition of temporary measures shall be permanently stabilized to prevent further erosion and sedimentation.

EROSION AND SEDIMENT CONTROL LEGEND

3.05	SILT FENCE	SF
3.07	STORM DRAIN INLET PROTECTION	IP
3.38	TREE PRESERVATION & PROTECTION	TP

ALL STANDARDS PER THE LATEST EDITION OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK

SHEET INDEX

SHEET	DESCRIPTION
1	VICINITY SKETCH, NOTES AND LEGEND
2	PLAN - CHICAGO AVENUE
3	PLAN - CHICAGO AVENUE
4	PLAN - CHICAGO AVENUE & STUART ST.
5	PLAN - STUART ST.
6	PLAN - 3rd STREET
7	PLAN - VIRGINIA AVENUE
8	PLAN - VIRGINIA AVENUE
9	PLAN - VIRGINIA AVENUE
10	PLAN - VIRGINIA AVENUE
11	PLAN - CHICAGO AVE. - GAY ST. To 1st ST.
12	DETAILS

General and Construction Notes

1. Erosion and sediment control measures shall be maintained continuously, relocated when and as necessary and shall be checked after every rainfall. Seeded areas shall be checked regularly and shall be watered, fertilized, reseeded and mulched as necessary to obtain a dense stand of grass.
2. All drain inlets shall be protected from siltation. Ineffective protection devices shall be immediately replaced and the inlet cleaned. Flushing is not an acceptable method of cleaning.
3. The location of existing utilities as shown is approximate only. The contractor is responsible for locating all public or private utilities which lie in or adjacent to the construction site. The contractor shall be responsible for repairing, at his expense, all existing utilities damaged during construction. Forty-eight (48) hours prior to any excavation call Miss Utility 1 (800) 552-7001.
4. All underground facilities shall be installed prior to the placement of any part of the pavement structure.
5. All materials used for fill or back-fill shall be free of wood, roots, rocks, boulders or any other non-compactible soil type material. Unsatisfactory materials also include man-made fills and refuse debris derived from any source.
6. Satisfactory material for use as fill includes material classified in ASTM D-2487 as GW, GP, GM, GC, SW, SP, SM, SC, ML, and CL groups. The moisture content shall be controlled within plus or minus 2 percentage points of optimum to facilitate compaction. Generally, unsatisfactory materials include materials classified in ASTM D-2487 as PT, CH, MH, OL, OH, and any soil too wet to facilitate compaction. Excavated soils may be used subject to approval of the City Engineer or his designee.
7. Materials used to construct embankments for any purpose, back-fill around drainage structures or in utility trenches or any other depression requiring fill or back-fill shall be compacted to a minimum of 95% of maximum density as determined by the standard Proctor test as set out in ASTM standard D-698. Maximum density to be used for density tests on 21A base stone shall be 142 PCF minimum.
8. Embankment fill and trench back-fill shall be placed in lifts at a maximum uncompacted depth of 8-inches and 6-inches, respectively.
9. All excavations, including trenches, shall be kept dry to protect their integrity.
10. Contractor shall provide qualified on-site inspectors to perform density tests on fill and sub-base, and proctor testing on fill soils. Contractor shall coordinate with on-site inspector and give adequate notice to see that proper testing is performed. Contractor shall not place any part of the pavement structure, including stone base, until testing is completed and continuance of work is authorized by the City Engineer. All test reports shall be provided to the City Engineer and the Resident Project Representative.
11. City inspectors, whether employed or contracted, have full authority to reject fill or backfill materials, require undercutting or subgrade stabilization, require provisions for subdrainage, or require other measure which affect the integrity of road and utility construction.
12. Compaction: Each lift of fill material must be tested at least once per 10,000 square feet. Each lift of trench backfill material must be tested at least once per 500 linear feet.
13. Pipe lengths shown are from center – to – center of structures.
14. Temporary construction easements shown are being provided by private property owners in total cooperation with the City. Such easements are for access and temporary occupation only as necessary to complete the Work. Unless an Owner specifically agrees, Contractor shall not use these areas for long term storage of materials, equipment or vehicles (including employee vehicles) and shall endeavor to limit impact on these areas to a minimum. Contractor shall cooperate with property owners to address their concerns over use of, or access to, their property. All damage to public and private properties caused by the Contractor's operations or negligence, beyond that defined by the work itself, shall be repaired to the City's satisfaction at no additional cost to the Owner.
15. Miscellaneous items of work shown on the drawings for which there is no specified unit price are considered to be incidental and the costs for such items shall be included in the price bid for other items.
16. Unless a separate pay item is listed, cost for removal of an item is included in the contract unit price for the corresponding new item.
17. Earth work shall include cut and fill adjacent to sidewalks and driveways to provide smooth transitions to existing grades with slopes not exceeding 3:1.
18. Sidewalks shall be doweled into storm structures to prevent differential settlement.
19. Existing large trees and shrubs planned for removal are shown on the plans. Smaller trees and shrubs may not be shown. Contractor shall examine site prior to bid and determine extent of tree and shrub removal necessary to complete the work and shall include the cost for such removal, including stump and root removal in the bid item for clearing and grubbing.
20. Temporary and permanent relocation of signs and mailboxes in project area shall be performed in accordance with section 104.05 of VDOT Standard Specifications. Contractor shall consider that all reinstalled signs must meet current MUTCD height standards regardless of existing sign heights. Bottom edge of signs shall be at least 7'-0" above finished grade.
21. Vehicle access shall be maintained at commercial entrances. Vehicle access at residential entrances shall be coordinated with home owners.
22. Price for segmental retaining wall shall include design and construction of wall systems to lines and grades shown on plans. Design shall, at minimum, consider soil bearing capacity, slope stability, backfill material, excavation requirements, drainage conditions, dead loads, live loads, existing facilities and planned construction. Wall design calculations and construction drawings shall be submitted to owner for review prior to start of construction. All documents shall include the services of a geotechnical engineer and soils testing firm to evaluate foundation and backfill soils and to perform compaction per wall manufacturer's requirements. Upon completion, the geotechnical engineer shall provide a signed statement that walls were constructed in accordance with the approved construction documents for the project. Price shall include all earthwork, backfill, drainage items, appurtenances, utility relocation and incidental items required to construct the retaining wall. Walls shall include matching solid caps. Wall systems shall be equivalent in quality to retaining wall systems by Anchor Diamond Pro retaining wall system, color shall be "Sahara" or equivalent as approved by the City.
23. TSW followed by + or – indicates proposed top of sidewalk elevation relative to existing grade.
24. Single Family Residential Entrances – use Standard Entrance Gutter CG-9B modified as follows: the distance from flow line to grade change (non-traversable slope) is reduced from 5'-0" to 3'-6". Provide 1" lip at flow line. See CITY DESIGN STANDARDS Sec. 3.10.2 & detail sheet 12.
25. All water service lines, meters, valves & fire hydrabts which conflict with proposed sidewalk or retaining wall construction have been relocated by the City. Meters have been relocated to green space or behind the proposed sidewalks and/or retaining walls. All sanitary sewer service lines and cleanouts which conflict with proposed sidewalk or retaining wall construction have been relocated by the City.
26. Utility poles in area of construction owned by the Harrisonburg Electric Commission (HEC) shall receive a treatment wrap by HEC prior to the placement of concrete. Contractor shall give HEC 48 hours minimum notice prior to scheduled concrete pours.

VDOT PROJECT SRTS-115-426, P101, R201, M501, UPC 97200
VDOT PROJECT SRTS-115-327, P101, R201, M501, UPC 97202
VDOT PROJECT SRTS-115-228, P101, R201, M501, UPC 97203

COMMONWEALTH OF VIRGINIA
JEROME W. PREY
Lic. No. 13957
PROFESSIONAL ENGINEER

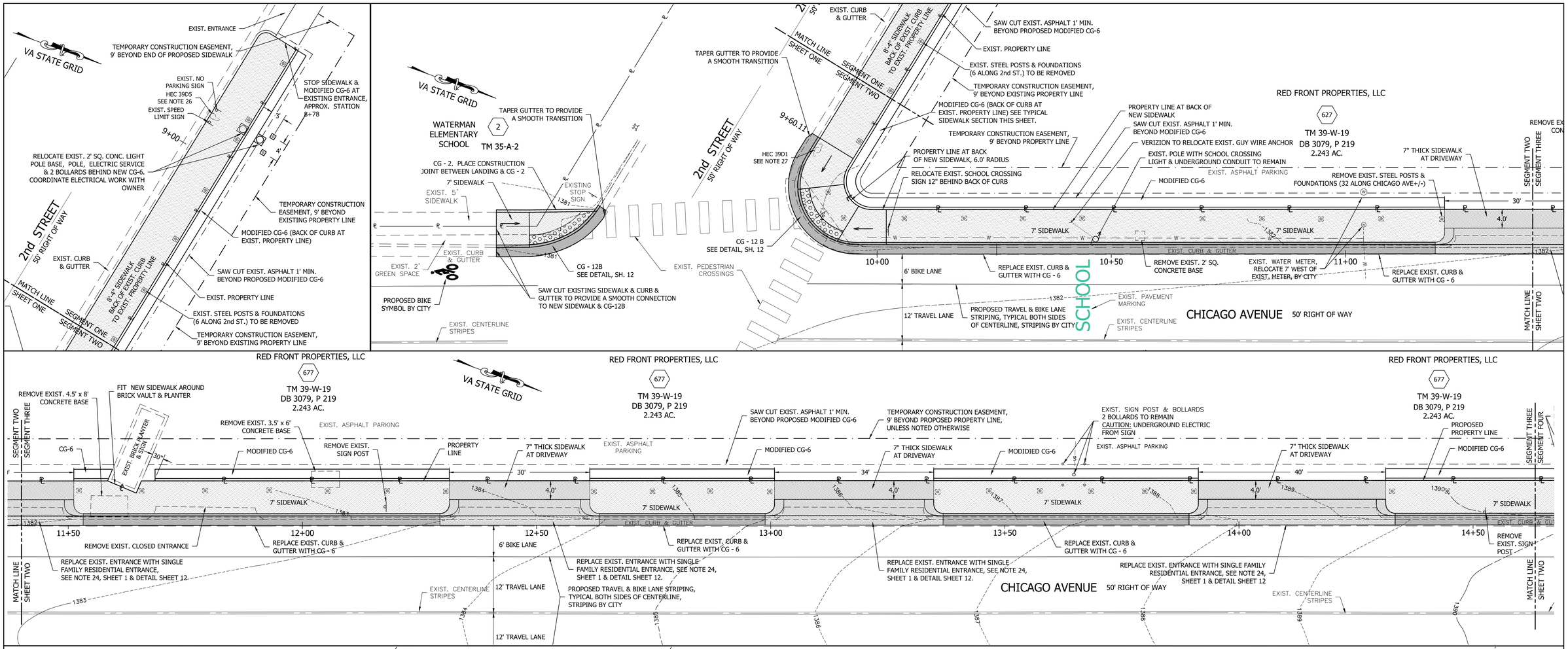
REV	DATE	DESCRIPTION	BY	SCALE: HORZ. N/A	
				DRAWN BY	DATE
				JRS & FEA	JAN. 2013
				CHECKED BY	DATE
				JWP	JAN. 2013
				DESIGN BY	DATE
				JWP	JAN. 2013
				TAX MAP	
				35, 39 & 40	

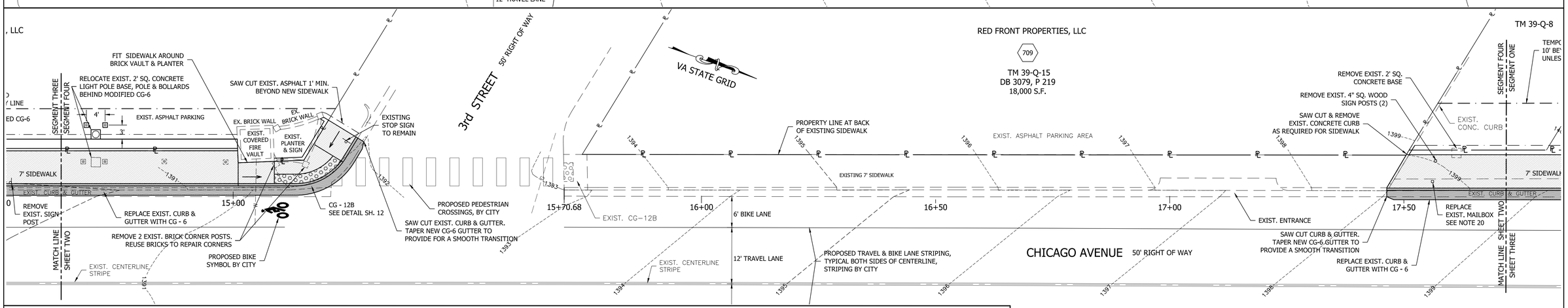
WATERMAN ELEMENTARY
SAFE ROUTES TO SCHOOL

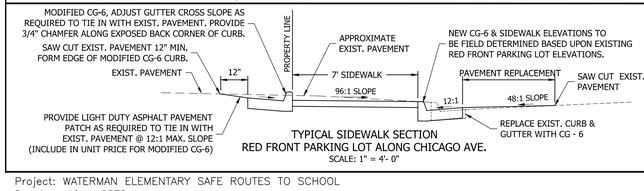
DIVISION OF ENGINEERING
CITY OF HARRISONBURG
409 SOUTH MAIN STREET
HARRISONBURG, VIRGINIA

PROJECT FILE #1011
SHEET
1 OF 12

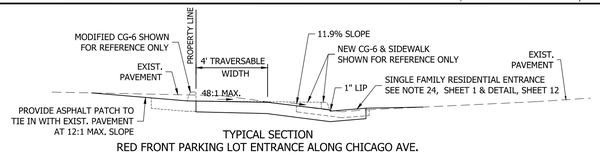
Project: WATERMAN ELEMENTARY SAFE ROUTES TO SCHOOL
Drawing: 1011 SRTS







TYPICAL SIDEWALK SECTION
RED FRONT PARKING LOT ALONG CHICAGO AVE.
SCALE: 1" = 4'- 0"



TYPICAL SECTION
RED FRONT PARKING LOT ENTRANCE ALONG CHICAGO AVE.
SCALE: 1" = 4'- 0"

COMMONWEALTH OF VIRGINIA
JEROME W. PREY
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PROFESSIONAL ENGINEER

PROJECT FILE #1011

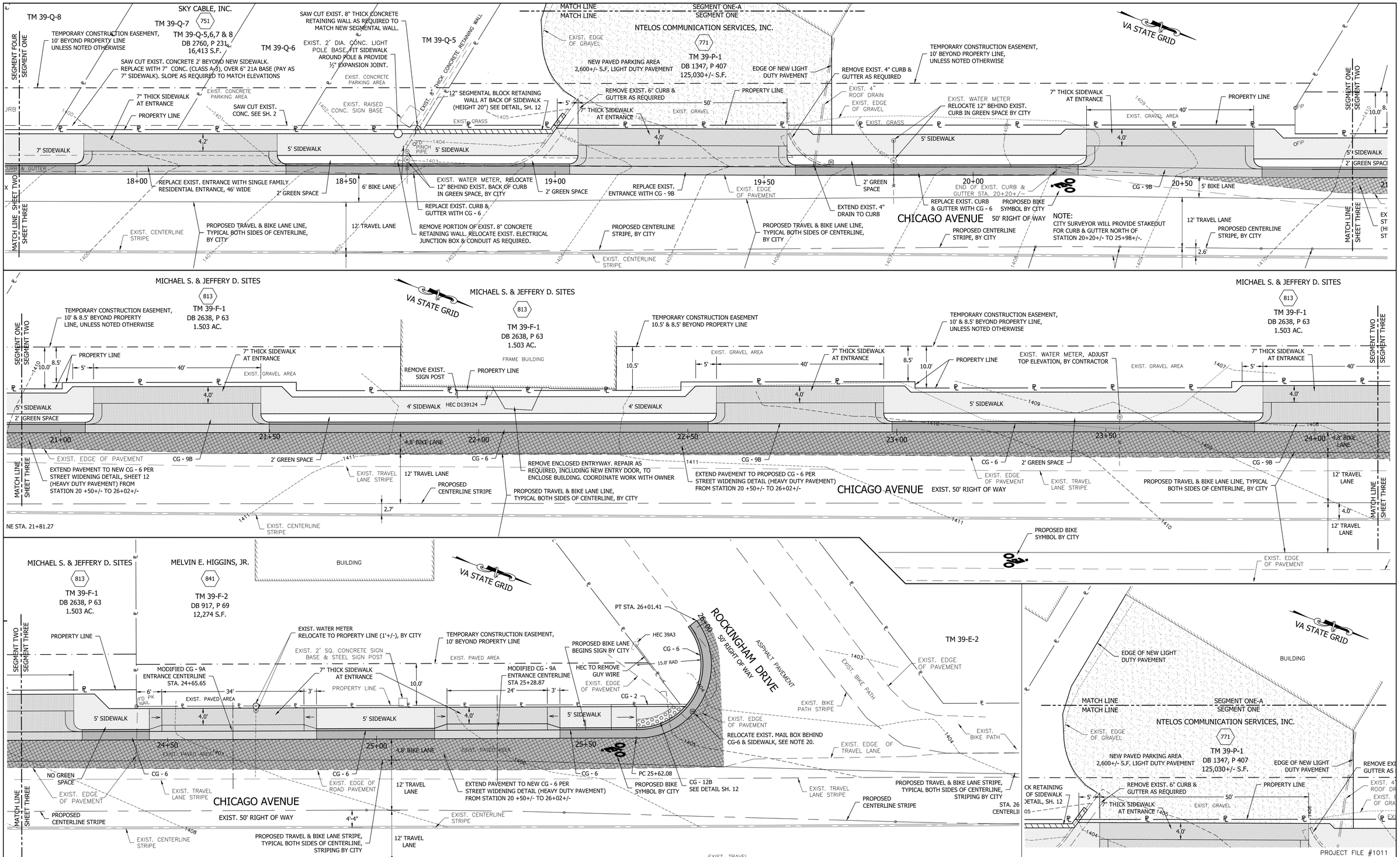
REV	DATE	DESCRIPTION	BY	SCALE: HORZ. 1" = 10'	
				DRAWN BY	DATE
				JRS & FEA	JAN. 2013
				CHECKED BY	DATE
				JWP	JAN. 2013
				DESIGN BY	DATE
				JWP	JAN. 2013
				TAX MAP	
				39	

WATERMAN ELEMENTARY
SAFE ROUTES TO SCHOOL

DIVISION OF ENGINEERING
CITY OF HARRISONBURG
409 SOUTH MAIN STREET
HARRISONBURG, VIRGINIA

SHEET
2 OF 12

Project: WATERMAN ELEMENTARY SAFE ROUTES TO SCHOOL
Drawing: 1011 SRTS



COMMONWEALTH OF VIRGINIA
JEROME W. PREY
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REV	DATE	DESCRIPTION	BY

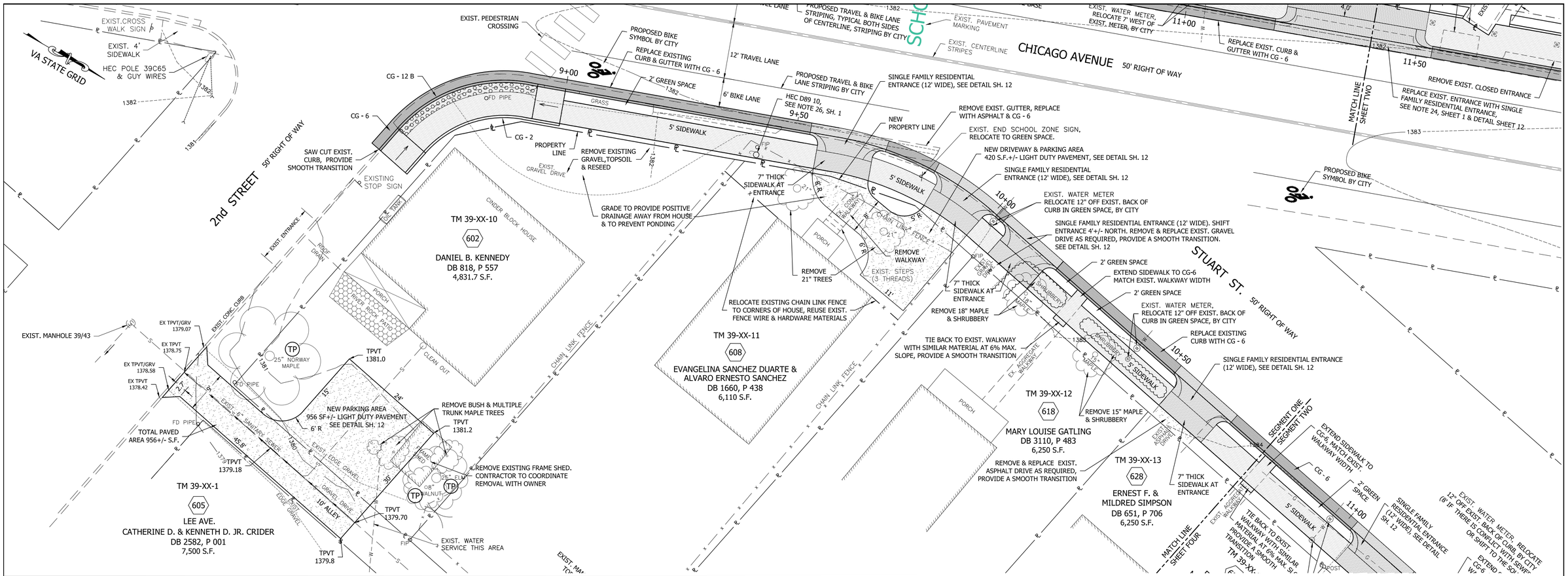
SCALE: HORZ. 1" = 10'	
DRAWN BY	DATE
JRS & FEA	JAN. 2013
CHECKED BY	DATE
JWP	JAN. 2013
DESIGN BY	DATE
JWP	JAN. 2013
TAX MAP	
39	

WATERMAN ELEMENTARY
SAFE ROUTES TO SCHOOL

DIVISION OF ENGINEERING
CITY OF HARRISONBURG
409 SOUTH MAIN STREET
HARRISONBURG, VIRGINIA

SHEET
3 OF 12

Project: WATERMAN ELEMENTARY SAFE ROUTES TO SCHOOL
Drawing: 1011 SRTS



PROJECT FILE #1011

COMMONWEALTH OF VIRGINIA
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PROFESSIONAL ENGINEER

REV	DATE	DESCRIPTION	BY

SCALE: HORZ. 1" = 10'	
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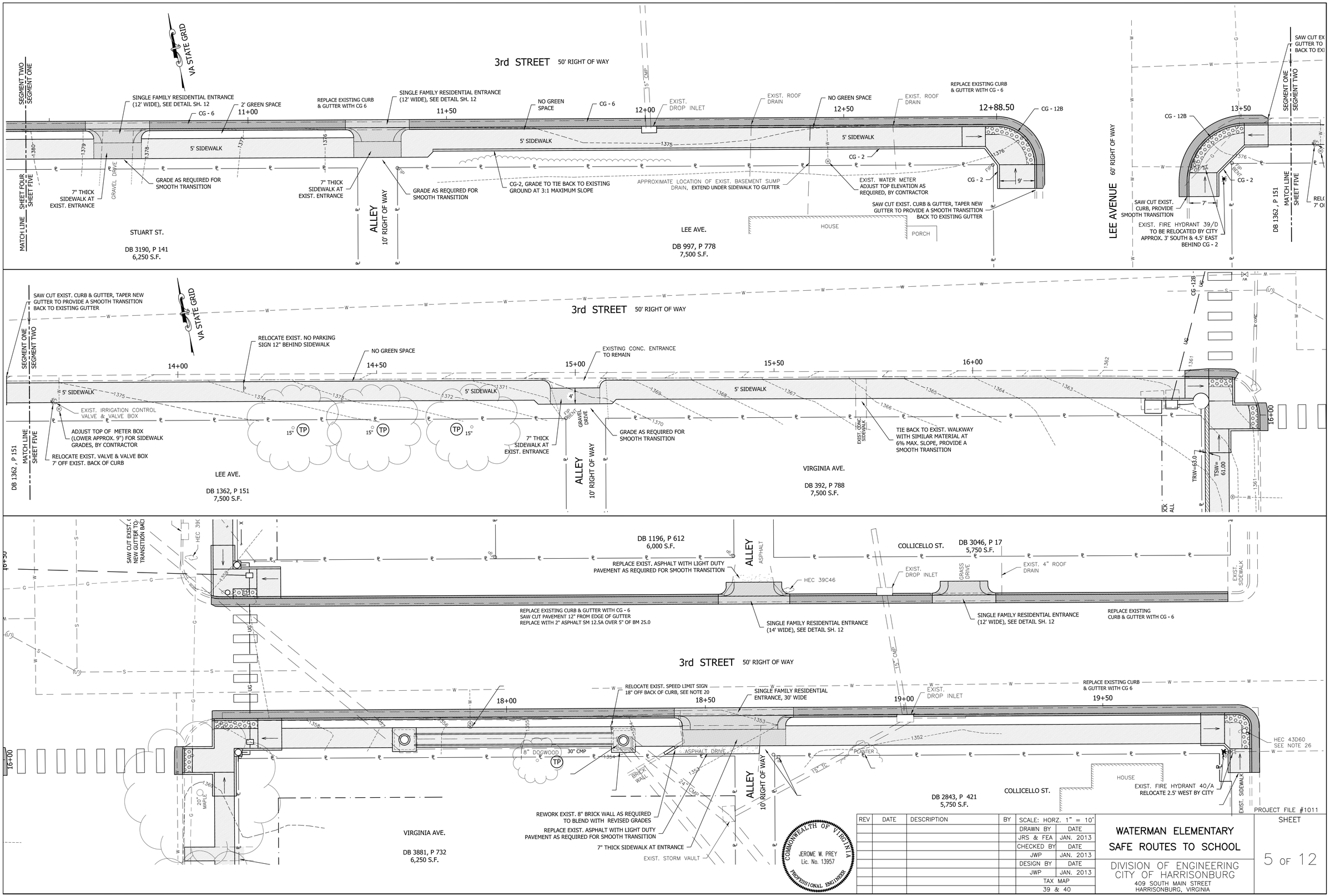
JRS & FEA	JAN. 2013
CHECKED BY	DATE
JWP	JAN. 2013
DESIGN BY	DATE
JWP	JAN. 2013
TAX MAP	
39	

WATERMAN ELEMENTARY
SAFE ROUTES TO SCHOOL

DIVISION OF ENGINEERING
CITY OF HARRISONBURG
409 SOUTH MAIN STREET
HARRISONBURG, VIRGINIA

SHEET
4 OF 12

Project: WATERMAN ELEMENTARY SAFE ROUTES TO SCHOOL
Drawing: 1011 SRTS



REV	DATE	DESCRIPTION	BY	SCALE: HORZ. 1" = 10'	
				DRAWN BY	DATE
				JRS & FEA	JAN. 2013
				CHECKED BY	DATE
				JWP	JAN. 2013
				DESIGN BY	DATE
				JWP	JAN. 2013
				TAX MAP	
				39 & 40	

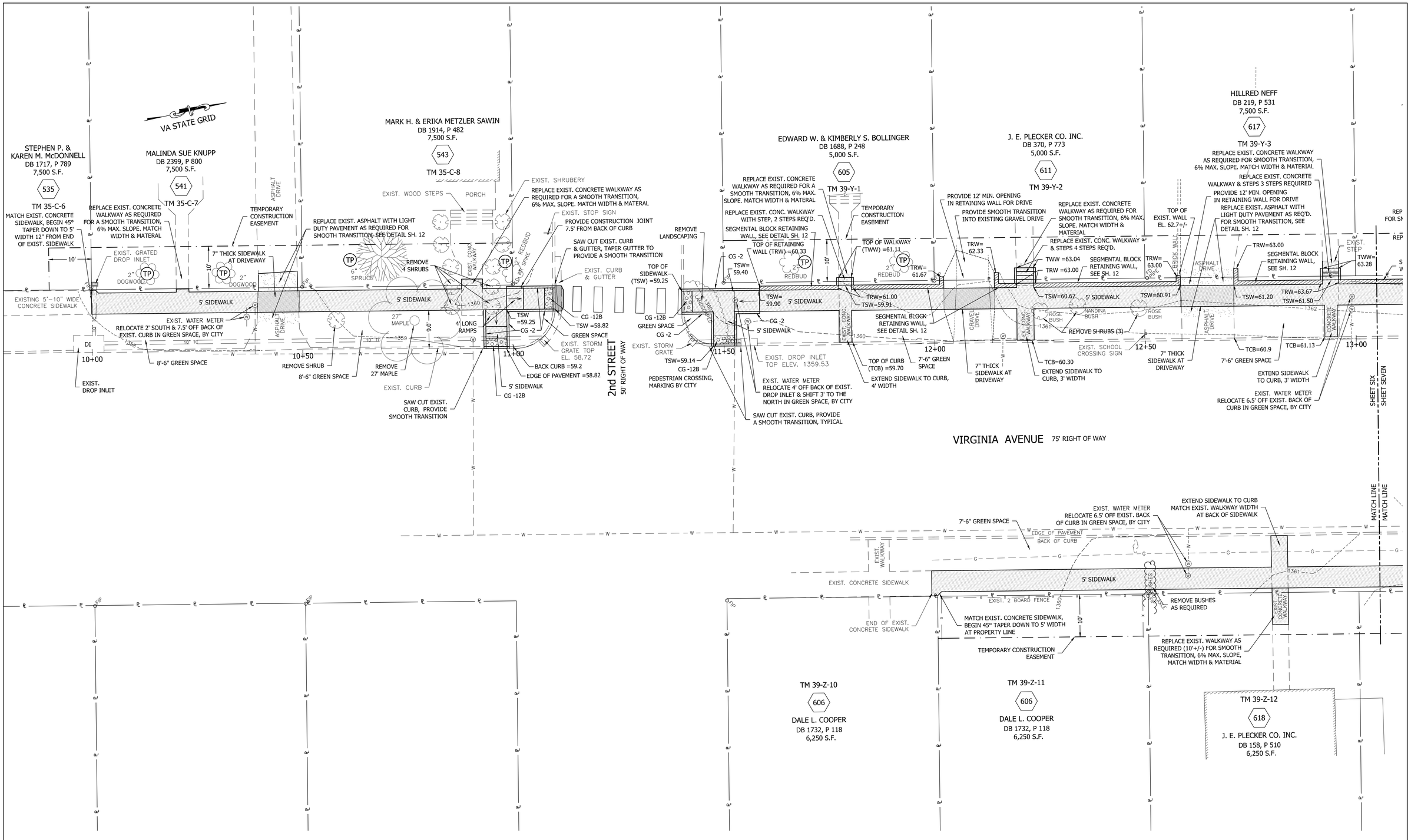
WATERMAN ELEMENTARY SAFE ROUTES TO SCHOOL

DIVISION OF ENGINEERING
CITY OF HARRISONBURG
409 SOUTH MAIN STREET
HARRISONBURG, VIRGINIA

PROJECT FILE #1011

SHEET 5 OF 12

Project: WATERMAN ELEMENTARY SAFE ROUTES TO SCHOOL
Drawing: 1011 SRTS



PROJECT FILE #1011

COMMONWEALTH OF VIRGINIA
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REV	DATE	DESCRIPTION	BY

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TAX MAP	
35 & 39	

WATERMAN ELEMENTARY
SAFE ROUTES TO SCHOOL

DIVISION OF ENGINEERING
CITY OF HARRISONBURG
409 SOUTH MAIN STREET
HARRISONBURG, VIRGINIA

SHEET
6 OF 12

Project: WATERMAN ELEMENTARY SAFE ROUTES TO SCHOOL
Drawing: 1011 SRTS

VA STATE GRID

HILLRED NEFF
DB 219, P 531
7,500 S.F.
617
TM 39-Y-4

J. E. PLECKER CO. INC.
DB 244, P 16
7,500 S.F.
627
TM 39-Y-5

J. E. PLECKER CO. INC.
DB 244, P 16
7,500 S.F.
637
TM 39-Y-6

JOEL M. SHRADLEY & KELLEY R. HORST
DB 3517, P 725
7,500 S.F.
647
TM 39-Y-7

SHIRLEY S. REEDY
DB 256, P 48
7,500 S.F.
657
TM 39-Y-8

DB 392, P 788
7,500 S.F.

3rd STREET
50' RIGHT OF WAY

REPLACE EXIST. WALKWAY AS REQUIRED FOR SMOOTH TRANSITION, 6% MAX. SLOPE MATCH WIDTH & MATERIAL
REPLACE EXIST. CONCRETE WALKWAY WITH STEPS, 3 STEPS REQUIRED
SEGMENTAL BLOCK RETAINING WALL, SEE DETAIL SH. 12
PROVIDE 12' MIN. OPENING IN RETAINING WALL FOR DRIVE
7" THICK SIDEWALK AT DRIVEWAY
PROVIDE SMOOTH TRANSITION INTO EXISTING GRAVEL DRIVE
TEMPORARY CONSTRUCTION EASEMENT
7" THICK SIDEWALK FOR FUTURE DRIVEWAY
SEGMENTAL BLOCK RETAINING WALL
REMOVE SHRUB
REPLACE EXIST. WALKWAY AS REQUIRED FOR SMOOTH TRANSITION, 6% MAX. SLOPE, MATCH WIDTH & MATERIAL, SEE PROFILE BELOW
REPLACE EXIST. CONCRETE WALKWAY & STEPS, 6 STEPS REQUIRED
SEGMENTAL BLOCK RETAINING WALL
TEMPORARY CONSTRUCTION EASEMENT
REPLACE EXIST. CONCRETE WALKWAY (46'+/-) & STEPS TO FRONT PORCH
REMOVE & REPLACE EXIST. CONCRETE WALKWAY & STEPS, 4 STEPS REQ'D.
REMOVE & REPLACE EXIST. CONCRETE STEPS AT PORCH 5 THREAD REQUIRED
REMOVE & REPLACE EXIST. CONCRETE WALKWAY & STEPS, 5 STEPS REQUIRED
SEGMENTAL BLOCK RETAINING WALL
REPLACE EXIST. WALKWAY AS REQUIRED FOR SMOOTH TRANSITION, 6% MAX. SLOPE, MATCH WIDTH & MATERIAL
SEGMENTAL BLOCK RETAINING WALL
RELOCATED TRAFFIC SIGNAL CONTROL PAD, SEE SHEET 5 & 8
RELOCATED JUNCTION BOX
CG - 2
2- 7 CONDUCTOR, 2- 4 CONDUCTOR
TRW = TOP OF POLE BASE (61.6+/-)
TRW=63.0
EXIST. TRAFFIC SIGNAL CONTROL PAD & JUNCTION BOX, TO BE RELOCATED, SEE SHEET 5
EXIST. TRAFFIC SIGNAL POLE (4' DIA). MOUNT PEDESTRIAN HEADS & PUSH BUTTONS TO POLE
CG -12B
CG - 2
EXIST. STORM GRATE TOP ELEV. 1360.1
CG -12B
PEDESTRIAN CROSSING, MARKING BY CITY
SAW CUT EXIST. CURB, PROVIDE A SMOOTH TRANSITION
CG -12B
CG -2
CG -2
PEDESTAL POLE, PEDESTRIAN HEADS & PUSH BUTTONS
1- 2" CONDUIT & 1- 1" CONDUIT FOR GROUND
2- 7 CONDUCTOR & 2- 4 CONDUCTOR
JUNCTION BOX
CG -12B
CG -6
2' GREEN SPACE

TRW =64.34
TRW=63.90
TRW =64.34
TSW =62.11
TSW=62.24
TWW=63.28
TWW=66.33
TRW=65.68
TSW=62.77
TWW=64.36
TRW=64.34
TSW=62.00
TWW=64.25
TRW=64.34
TSW=61.28
TSW= 61.00

EXIST. WATER METER RELOCATED 6.6' OFF EXIST. BACK OF CURB IN GREEN SPACE, BY CITY
7'-6" GREEN SPACE
EXTEND SIDEWALK PERPENDICULAR TO CURB, 3' WIDTH
EXIST. CONCRETE WALKWAY, REMOVE AS REQUIRED
TCB=61.84
TCB=61.75
7'-6" GREEN SPACE
EXIST. CONCRETE WALKWAY & STEPS, REMOVE AS REQUIRED
TCB=62.40
EXTEND SIDEWALK TO CURB, 3' WIDTH
EXIST. WATER METER RELOCATE 6.4' OFF EXIST. BACK OF CURB IN GREEN SPACE, BY CITY
EXTEND SIDEWALK TO CURB, 3' WIDTH
TCB=61.57
EXIST. CONCRETE WALKWAY, STEPS & WALL, REMOVE AS REQUIRED
TCB=61.64
REMOVE ROSE BUSHES
EXTEND SIDEWALK TO CURB, 3' WIDTH
7'-6" GREEN SPACE
TCB=60.92
EXIST. WATER METER ADJUST TOP ELEVATION OF METER BOX AS REQUIRED, BY CONTRACTOR

13+50
14+00
14+50
15+00
15+50
16+00

VIRGINIA AVENUE 75' RIGHT OF WAY

SHEET SIX
SHEET SEVEN
SHEET SEVEN
SHEET EIGHT
MATCH LINE
MATCH LINE
MATCH LINE
MATCH LINE

7'-6" GREEN SPACE
7" THICK SIDEWALK AT DRIVEWAY, 12' WIDE
EXIST. WATER METER ADJUST TOP ELEVATION, BY CONTRACTOR
7'-6" GREEN SPACE
REMOVE 18" MIMOSA
EXTEND SIDEWALK TO CURB MATCH EXIST. WALKWAY WIDTH
REMOVE 20" MAPLE
7'-6" GREEN SPACE
REMOVE 20" MAPLE
EXIST. WOVEN WIRE FENCE
EXIST. WELDED WIRE FENCE (2"X4")
REMOVE SHRUBS AS REQUIRED
EXIST. CONCRETE WALKWAY
TEMPORARY CONSTRUCTION EASEMENT
TIE BACK TO EXIST. WALKWAY WITH SIMILAR MATERIAL AT 6% MAX. SLOPE, PROVIDE A SMOOTH TRANSITION
TEMPORARY CONSTRUCTION EASEMENT
RELOCATE EXISTING WOVEN WIRE FENCE & GATE 2' BEHIND SIDEWALK (6'+/- BEHIND EXIST. FENCE)
REGRADE GRAVEL DRIVE AT 16% MAX. SLOPE AS REQUIRED TO TIE BACK TO EXISTING GROUND
REGRADE AT 3:1 MAX. SLOPE
TEMPORARY CONSTRUCTION EASEMENT
RELOCATE EXISTING WELDED WIRE FENCE 2' BEHIND SIDEWALK (6'+/- BEHIND EXIST. FENCE)

TM 39-Z-13
618
J. E. PLECKER CO. INC.
DB 158, P 510
6,250 S.F.

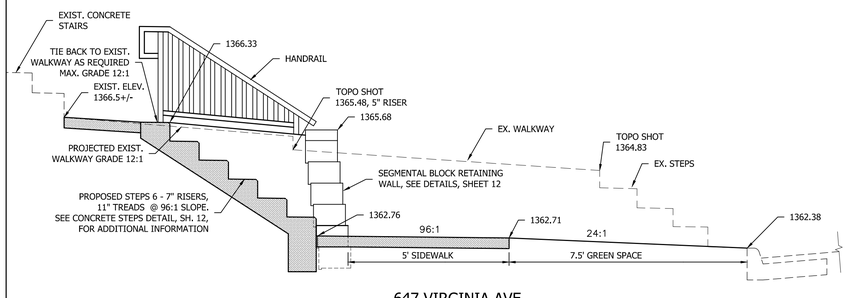
TM 39-Z-14
618
J. E. PLECKER CO. INC.
DB 158, P 510
6,250 S.F.

TM 39-Z-15
618
J. E. PLECKER CO. INC.
DB 158, P 510
6,250 S.F.

TM 39-Z-16
618
J. E. PLECKER CO. INC.
DB 158, P 510
6,250 S.F.

TM 39-Z-17
618
J. E. PLECKER CO. INC.
DB 158, P 510
6,250 S.F.

TM 39-Z-18
668
CHRISTOPHER I. SIONS & HANNAH E. KIM
DB 3881, P 732
6,250 S.F.



647 VIRGINIA AVE.
CENTERLINE WALKWAY PROFILE
1" = 2'-0"

COMMONWEALTH OF VIRGINIA
JEROME W. PREY
Lic. No. 13957
PROFESSIONAL ENGINEER

PROJECT FILE #1011

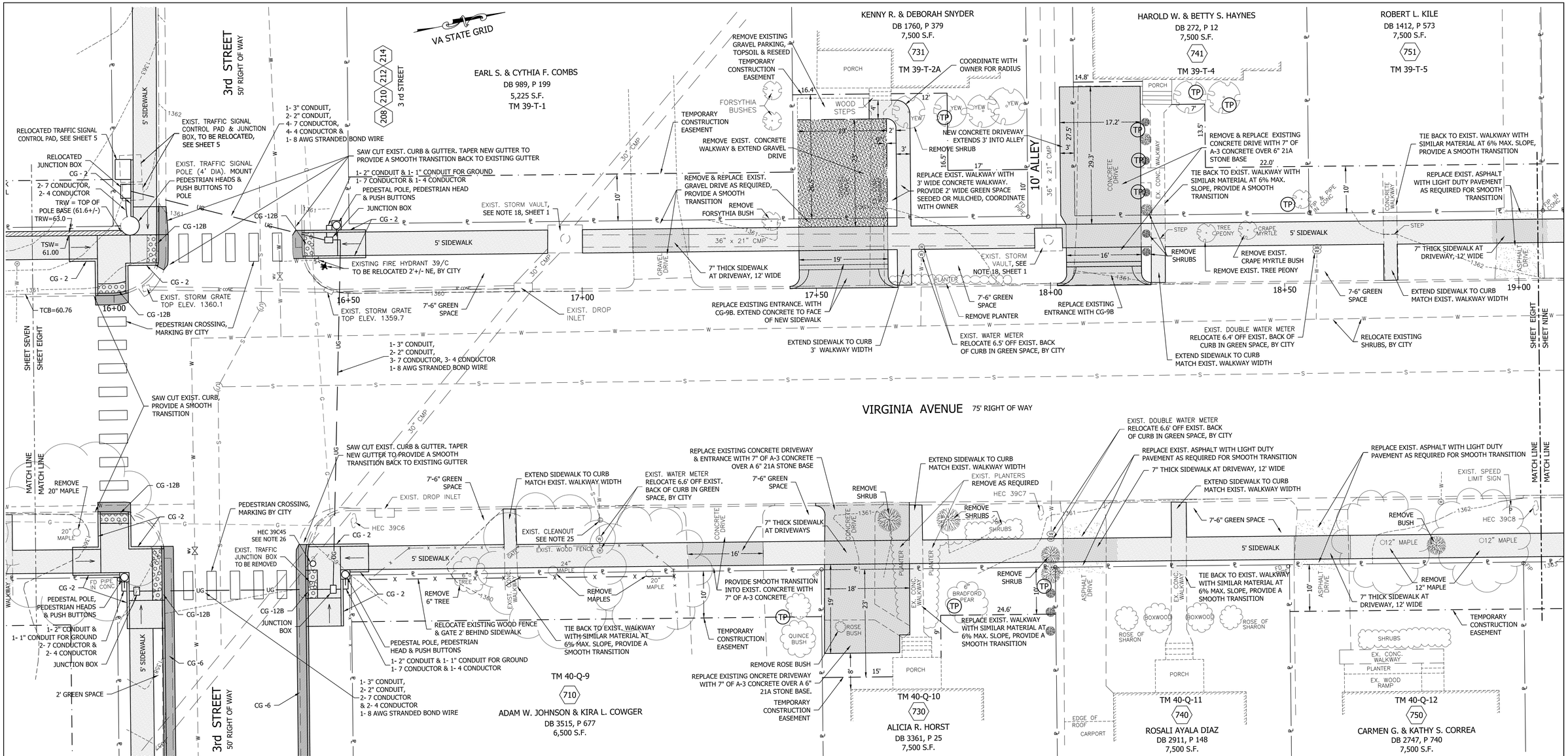
REV	DATE	DESCRIPTION	BY	SCALE: HORZ. 1" = 10'	
				DRAWN BY	DATE
				JRS & FEA	JAN. 2013
				CHECKED BY	DATE
				JWP	JAN. 2013
				DESIGN BY	DATE
				JWP	JAN. 2013
				TAX MAP	
				39	

WATERMAN ELEMENTARY
SAFE ROUTES TO SCHOOL

DIVISION OF ENGINEERING
CITY OF HARRISONBURG
409 SOUTH MAIN STREET
HARRISONBURG, VIRGINIA

SHEET
7 OF 12

Project: WATERMAN ELEMENTARY SAFE ROUTES TO SCHOOL
Drawing: 1011 SRTS



PEDESTRIAN SIGNALS: 3rd ST. & VIRGINIA AVE.

DESCRIPTION OF WORK

Provide conduits where shown on plans with 18" minimum cover and 8" minimum separation at cross pipe barrels and 18" minimum separation within two feet of cross pipe joints. Existing conduits and conductors not required for signal or lighting operations shall be removed. Conduits shall enter pull boxes from below (side entrances are not allowed). Directional borings are required for conduit installations. Contractor shall contact "MISS UTILITY" at least 48 hours before starting directional borings. Contractor shall coordinate work with Traffic Engineering.

Contractor shall submit a traffic management plan at least two weeks prior to start of boring in case trench excavation work is required.

If site conditions will not allow directional borings, trench excavation will be required for conduit installation. Conduit installation work shall be preformed between 9:00 PM and 5:00 AM. Contractor shall provide saw cutting, pavement removal, excavation, backfill and pavement restoration. All backfill material shall be 21A stone placed in 6" lifts and compacted to 95% Protor density. Asphaltic base mix shall be 7" BM-25. Asphaltic surface mix shall be 2" SM 12.5D.

Provide 52" x 35" x 18" concrete pad for traffic control equipment.

Provide 3 each: JB-3C junction boxes at locations shown

Provide 3 each: pedestal poles, bases and concrete foundations at locations shown

Provide 6 each: pedestrian heads at locations shown

Provide 6 each: pedestrian push buttons

Provide wire and terminations from heads to controller cabinets as shown

Provide wire and terminations from actuation devices to controller cabinets as shown

Existing pedestrian signal equipment removed shall be delivered to City Traffic Engineering.

City Traffic Engineering will provide programming of the controllers.

MATERIAL SPECIFICATIONS

Pedestrian Heads: Standard SP-8, Leotech Model TP-16H-CIL-9

Pedestrian Push Buttons: Standard PA-2, Bull Dog Model OMBLM2-Y

Junction Boxes: Amorcast Products Company, 20K rated polymer concrete cover, polymer concrete ring w/FRP skirt, type JB-2C .

The word "TRAFFIC" shall be stamped on the junction box cover.

Conduits: Schedule 80 PVC

Wire: 14 AWG STRANDED IMSA approved

Signs: MUTCD R10-3e

Pole & base: VDOT PF-2 H=8'

PROJECT FILE #1011

COMMONWEALTH OF VIRGINIA
JEROME W. PREY
Lic. No. 13957
PROFESSIONAL ENGINEER

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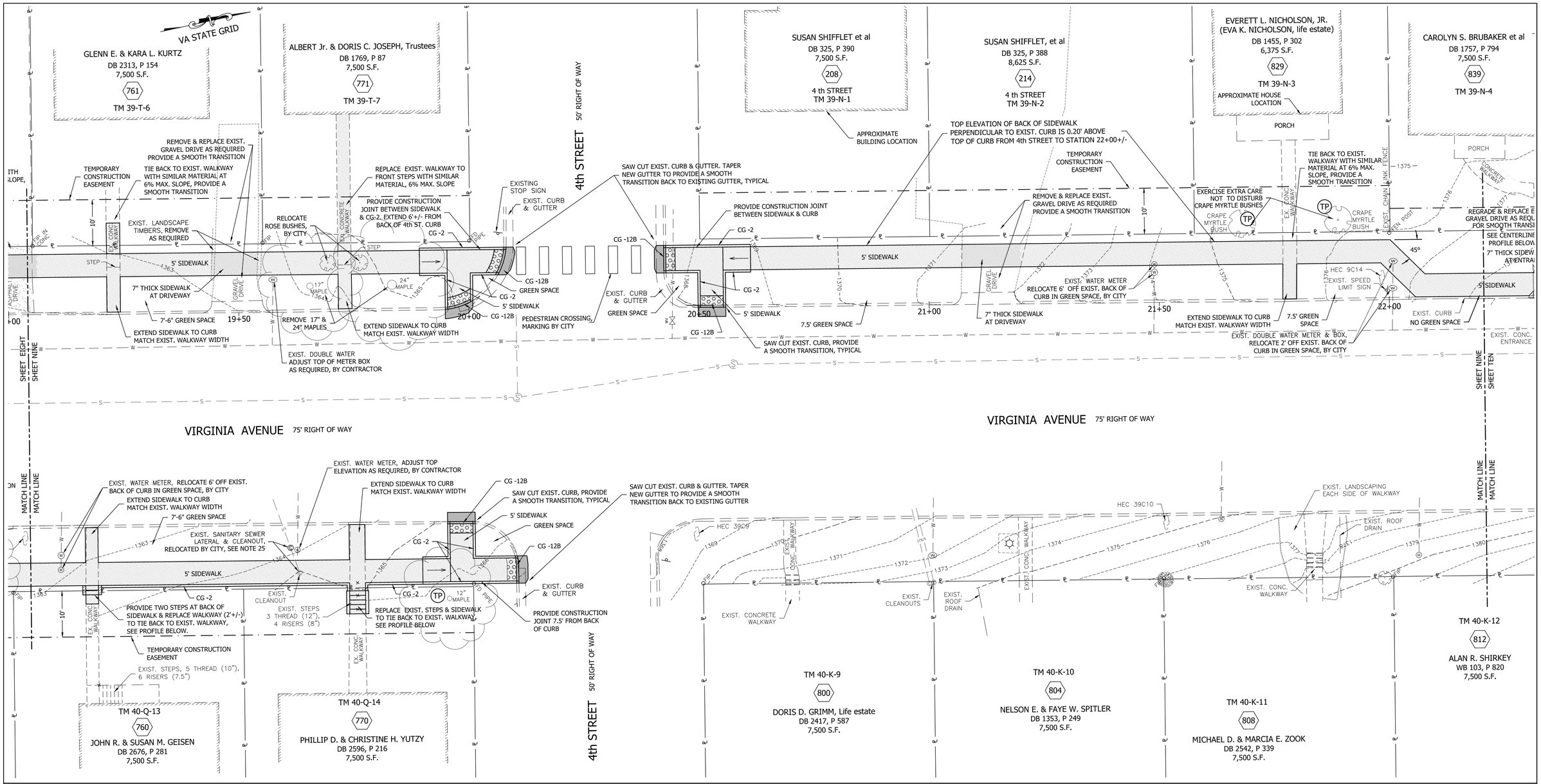
				DESIGN BY	DATE
				JWP	JAN. 2013
				TAX MAP	
				39 & 40	

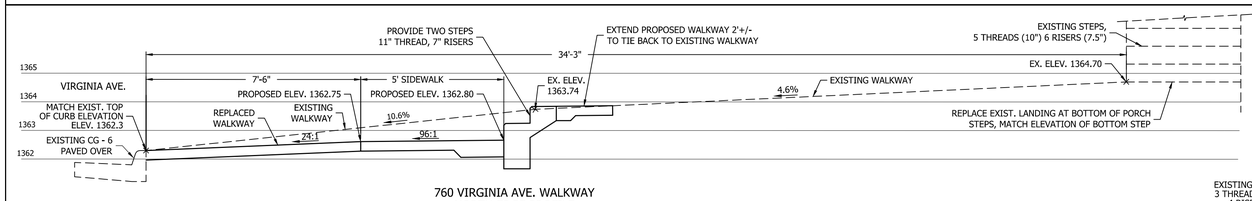
WATERMAN ELEMENTARY
SAFE ROUTES TO SCHOOL

DIVISION OF ENGINEERING
CITY OF HARRISONBURG
409 SOUTH MAIN STREET
HARRISONBURG, VIRGINIA

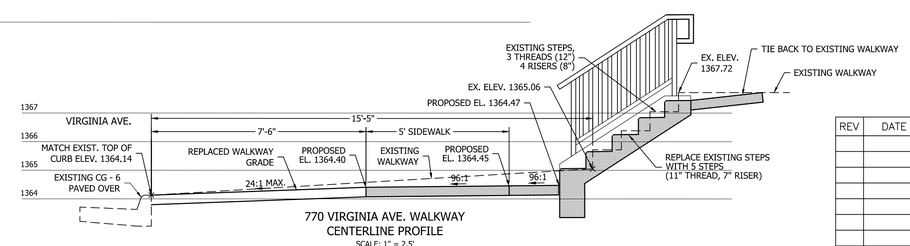
SHEET
8 OF 12

Project: WATERMAN ELEMENTARY SAFE ROUTES TO SCHOOL
Drawing: 1011 SRTS





760 VIRGINIA AVE. WALKWAY
NORTH EDGE PROFILE
SCALE: 1" = 2.5'



770 VIRGINIA AVE. WALKWAY
CENTERLINE PROFILE
SCALE: 1" = 2.5'

COMMONWEALTH OF VIRGINIA
JEROME W. PREY
Lic. No. 13957
PROFESSIONAL ENGINEER

PROJECT FILE #1011

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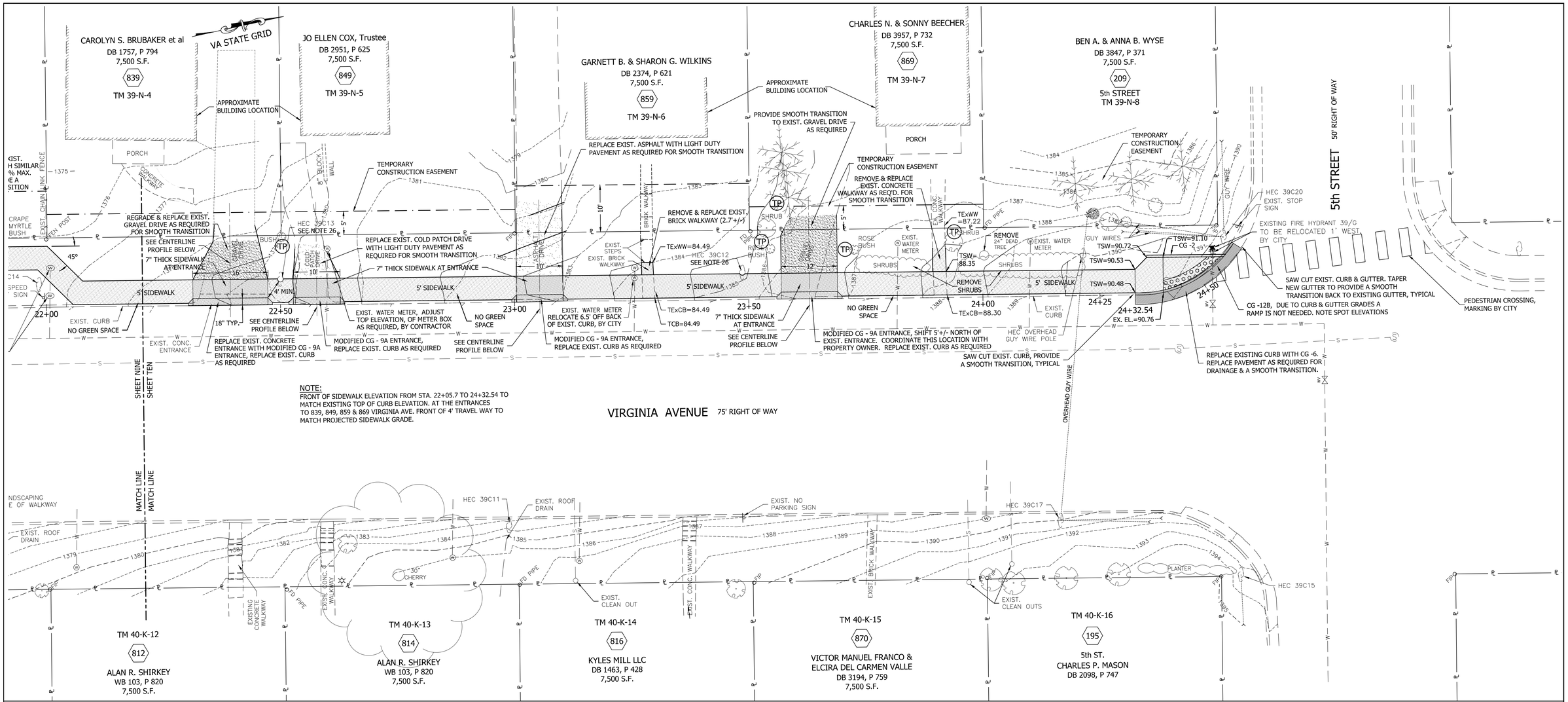
				JWP	JAN. 2013
				TAX MAP	
				39 & 40	

WATERMAN ELEMENTARY
SAFE ROUTES TO SCHOOL

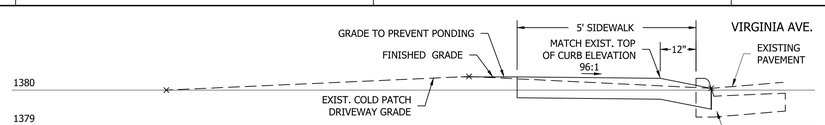
DIVISION OF ENGINEERING
CITY OF HARRISONBURG
409 SOUTH MAIN STREET
HARRISONBURG, VIRGINIA

SHEET
9 OF 12

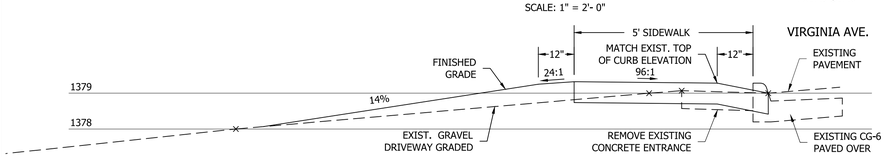
Project: WATERMAN ELEMENTARY SAFE ROUTES TO SCHOOL
Drawing: 1011 SRTS



NOTE:
FRONT OF SIDEWALK ELEVATION FROM STA. 22+05.7 TO 24+32.54 TO MATCH EXISTING TOP OF CURB ELEVATION. AT THE ENTRANCES TO 839, 849, 859 & 869 VIRGINIA AVE. FRONT OF 4' TRAVEL WAY TO MATCH PROJECTED SIDEWALK GRADE.



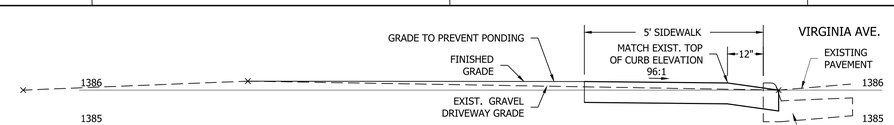
849 VIRGINIA AVE. - CENTERLINE DRIVEWAY PROFILE
SCALE: 1" = 2'- 0"



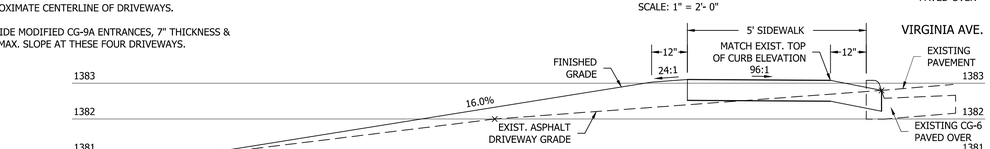
839 VIRGINIA AVE. - CENTERLINE DRIVEWAY PROFILE
SCALE: 1" = 2'- 0"

NOTES:
THE EXISTING GRADE LINES SHOWN ARE THE APPROXIMATE CENTERLINE OF DRIVEWAYS.

PROVIDE MODIFIED CG-9A ENTRANCES, 7" THICKNESS & 5:12 MAX. SLOPE AT THESE FOUR DRIVEWAYS.



869 VIRGINIA AVE. - CENTERLINE DRIVEWAY PROFILE
SCALE: 1" = 2'- 0"



859 VIRGINIA AVE. - CENTERLINE DRIVEWAY PROFILE
SCALE: 1" = 2'- 0"

PROJECT FILE #1011

COMMONWEALTH OF VIRGINIA
JEROME W. PREY
Lic. No. 13957
PROFESSIONAL ENGINEER

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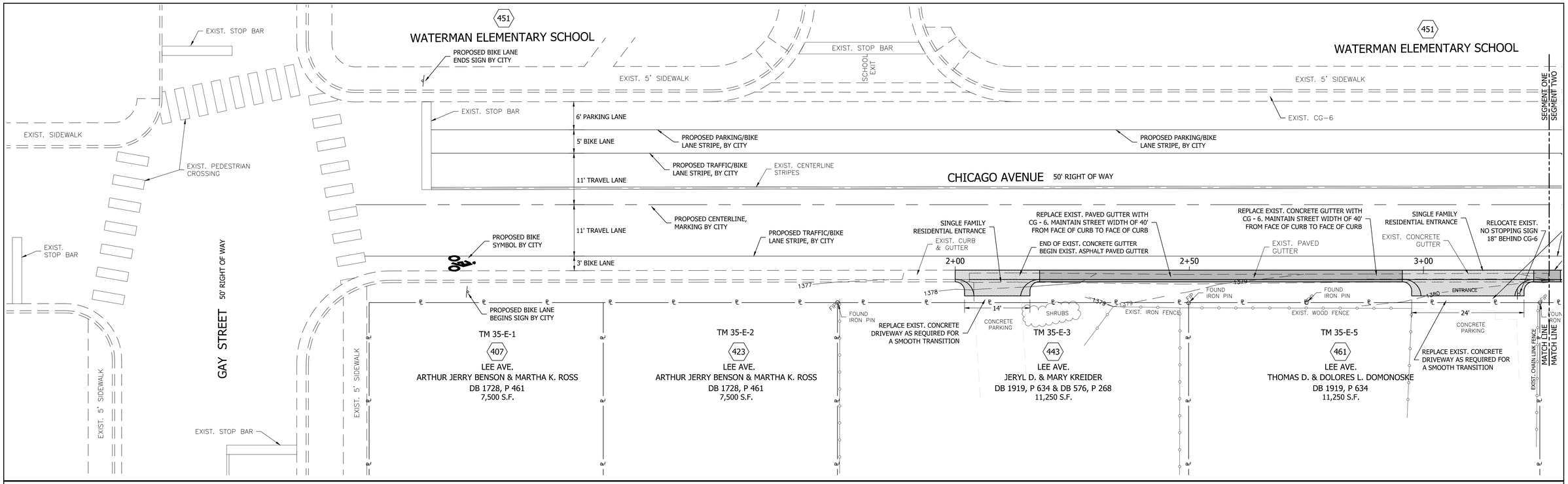
				DESIGN BY	DATE
				JWP	JAN. 2013
				TAX MAP	
				39 & 40	

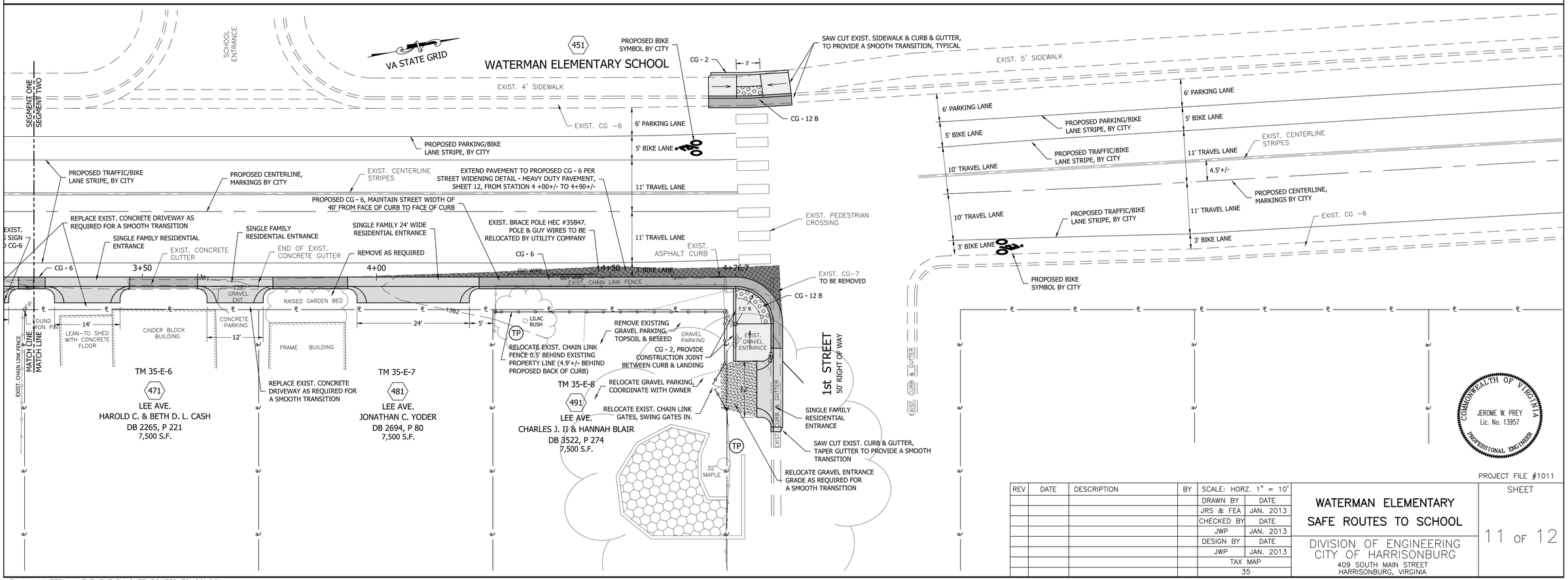
WATERMAN ELEMENTARY
SAFE ROUTES TO SCHOOL

DIVISION OF ENGINEERING
CITY OF HARRISONBURG
409 SOUTH MAIN STREET
HARRISONBURG, VIRGINIA

SHEET
10 OF 12

Project: WATERMAN ELEMENTARY SAFE ROUTES TO SCHOOL
Drawing: 1011 SRTS





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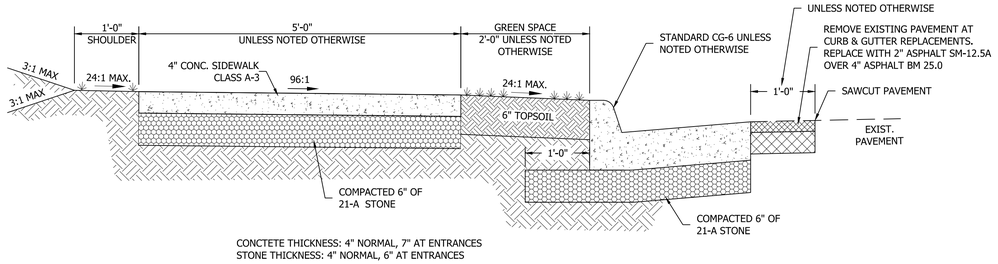
				TAX MAP	
				35	

WATERMAN ELEMENTARY
SAFE ROUTES TO SCHOOL

DIVISION OF ENGINEERING
CITY OF HARRISONBURG
409 SOUTH MAIN STREET
HARRISONBURG, VIRGINIA

SHEET
11 OF 12

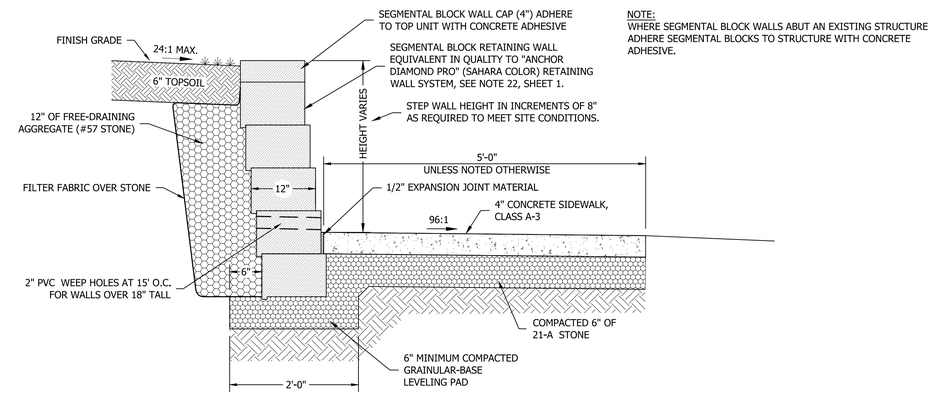
Project: WATERMAN ELEMENTARY SAFE ROUTES TO SCHOOL
Drawing: 1011 SRTS



CONCTETE THICKNESS: 4" NORMAL, 7" AT ENTRANCES
STONE THICKNESS: 4" NORMAL, 6" AT ENTRANCES

TYPICAL SIDEWALK SECTION (NTS)

(NTS)

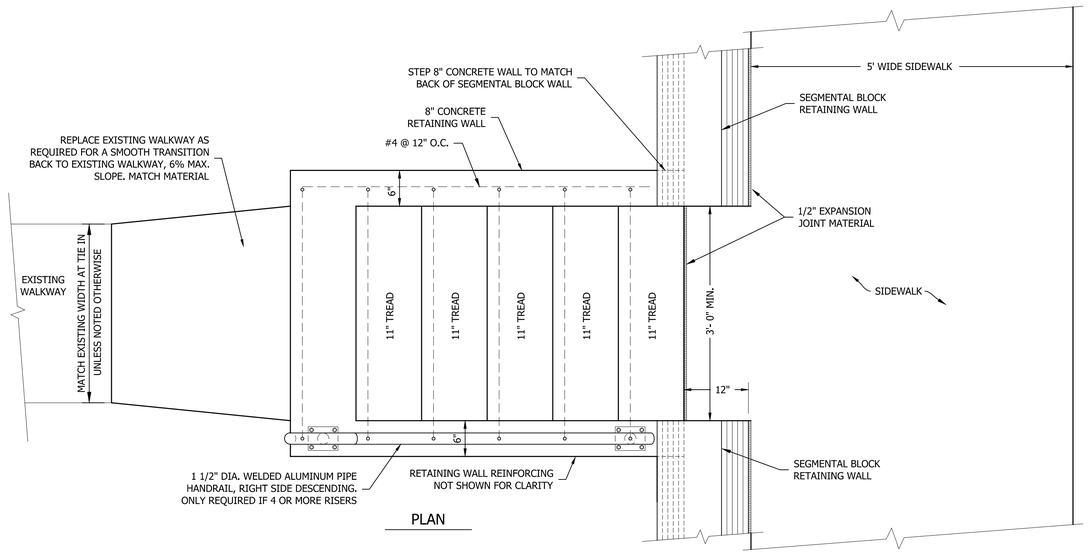


NOTE:
WHERE SEGMENTAL BLOCK WALLS ABUT AN EXISTING STRUCTURE ADHERE SEGMENTAL BLOCKS TO STRUCTURE WITH CONCRETE ADHESIVE.

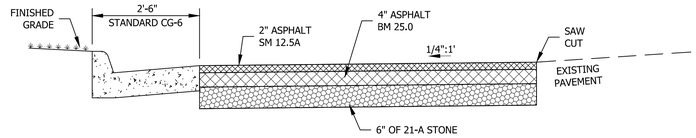
SEGMENTAL BLOCK RETAINING WALL

(NTS)

NOTE: UNIT PRICE IS FOR EXPOSED FACE OF WALL.



PLAN

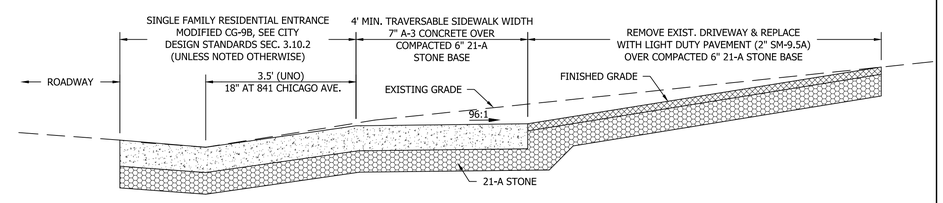


TYPICAL SECTION - STREET WIDENING

(HEAVY DUTY PAVEMENT)

(CHICAGO AVE. - SHEET 3, STATION 20+20+/- TO STATION 26+02+/-)
(CHICAGO AVE. - SHEET 11, STATION 3+77+/- TO STATION 4+90+/-)

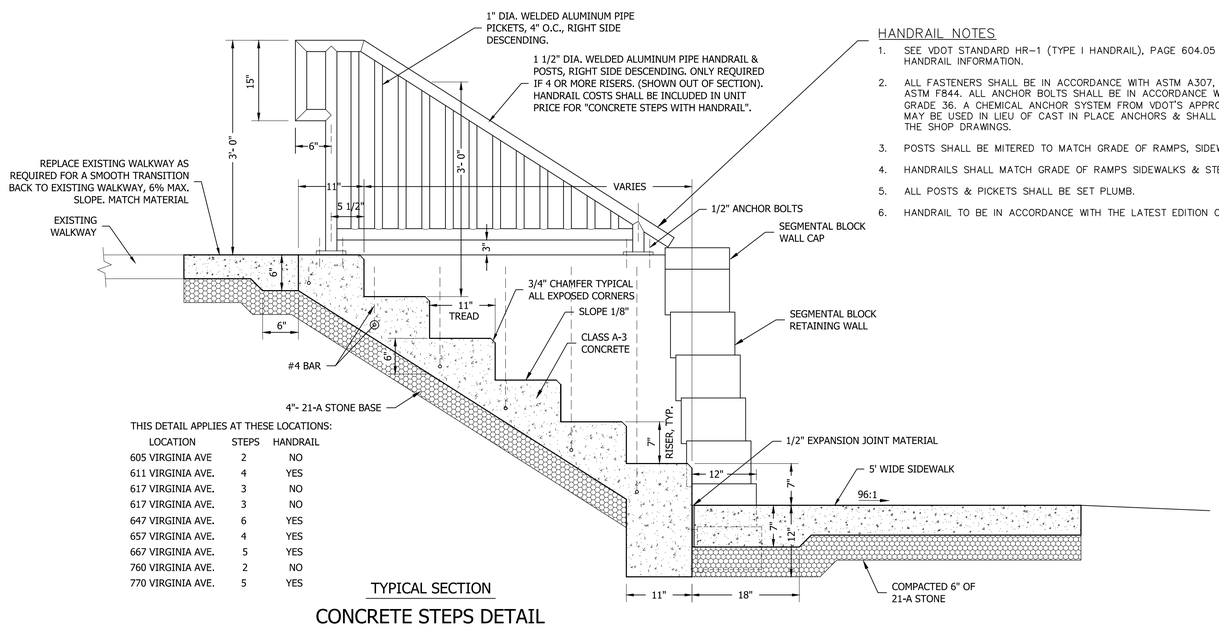
(NTS)



SINGLE FAMILY RESIDENTIAL ENTRANCE &

TYPICAL ASPHALT DRIVEWAY REPLACEMENT DETAIL

(LIGHT DUTY PAVEMENT)



THIS DETAIL APPLIES AT THESE LOCATIONS:

LOCATION	STEPS	HANDRAIL
605 VIRGINIA AVE	2	NO
611 VIRGINIA AVE.	4	YES
617 VIRGINIA AVE.	3	NO
617 VIRGINIA AVE.	3	NO
647 VIRGINIA AVE.	6	YES
657 VIRGINIA AVE.	4	YES
667 VIRGINIA AVE.	5	YES
760 VIRGINIA AVE.	2	NO
770 VIRGINIA AVE.	5	YES

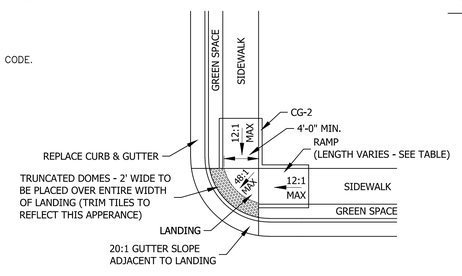
TYPICAL SECTION

CONCRETE STEPS DETAIL

(NTS)

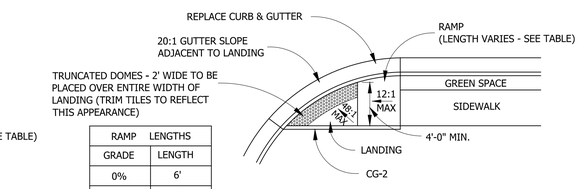
HANDRAIL NOTES

1. SEE VDOT STANDARD HR-1 (TYPE I HANDRAIL), PAGE 604.05 FOR ADDITIONAL HANDRAIL INFORMATION.
2. ALL FASTENERS SHALL BE IN ACCORDANCE WITH ASTM A307, ASTM A563 AND ASTM F844. ALL ANCHOR BOLTS SHALL BE IN ACCORDANCE WITH AASHTO M314, GRADE 36. A CHEMICAL ANCHOR SYSTEM FROM VDOT'S APPROVED MATERIAL LIST MAY BE USED IN LIEU OF CAST IN PLACE ANCHORS & SHALL BE INCLUDED IN THE SHOP DRAWINGS.
3. POSTS SHALL BE MITERED TO MATCH GRADE OF RAMPS, SIDEWALKS, AND STEPS.
4. HANDRAILS SHALL MATCH GRADE OF RAMPS SIDEWALKS & STEPS.
5. ALL POSTS & PICKETS SHALL BE SET PLUMB.
6. HANDRAIL TO BE IN ACCORDANCE WITH THE LATEST EDITION OF THE USBC CODE.



CG-12B TWO-WAY CURB RAMP

7" CLASS A-3 CONCRETE
4" 21-A COMPACTED STONE BASE
SCALE: 1" = 10'



RAMP LENGTHS	
GRADE	LENGTH
0%	6'
1%	7'
2%	8'
3%	9'
4%	12'
> 4%	15'

CG-12B ONE-WAY CURB RAMP

7" CLASS A-3 CONCRETE
4" 21-A COMPACTED STONE BASE
SCALE: 1" = 10'

PROJECT FILE #1011

COMMONWEALTH OF VIRGINIA
JEROME W. PREY
Lic. No. 13957
PROFESSIONAL ENGINEER

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TAX MAP	
xxx	

WATERMAN ELEMENTARY
SAFE ROUTES TO SCHOOL

DIVISION OF ENGINEERING
CITY OF HARRISONBURG
409 SOUTH MAIN STREET
HARRISONBURG, VIRGINIA

SHEET
12 OF 12

Project: WATERMAN ELEMENTARY SAFE ROUTES TO SCHOOL
Drawing: 1011 SRTS