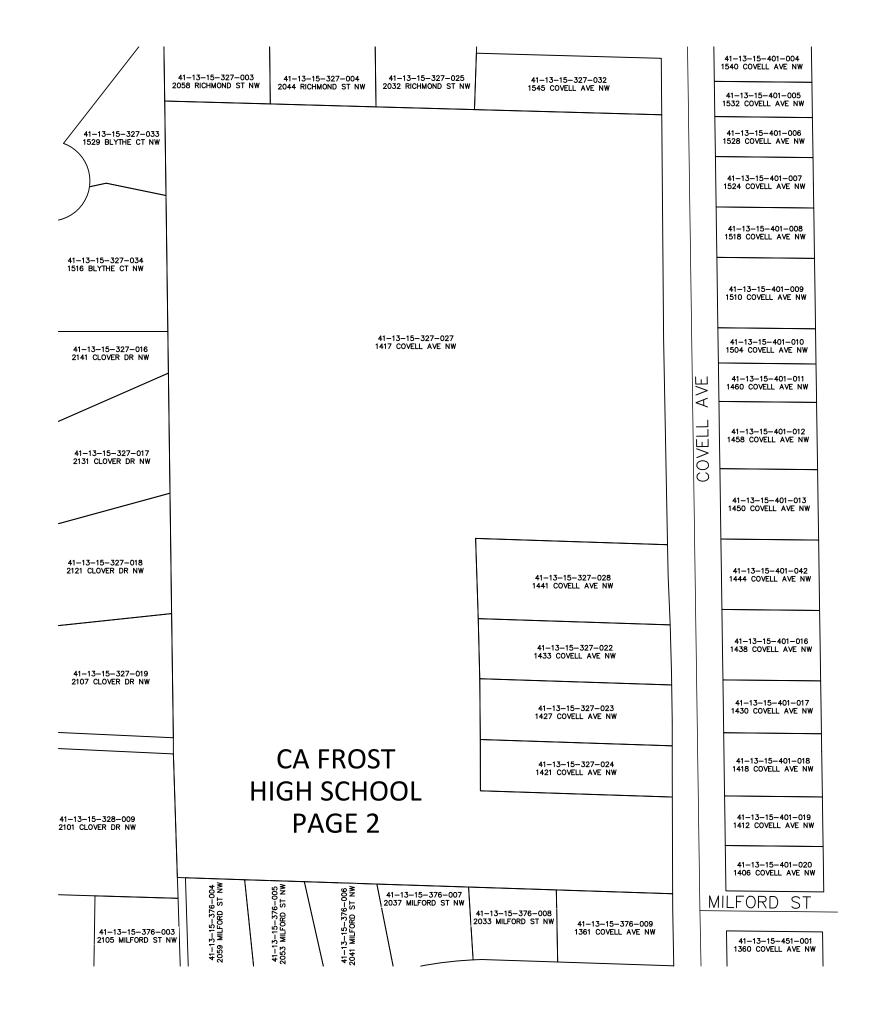
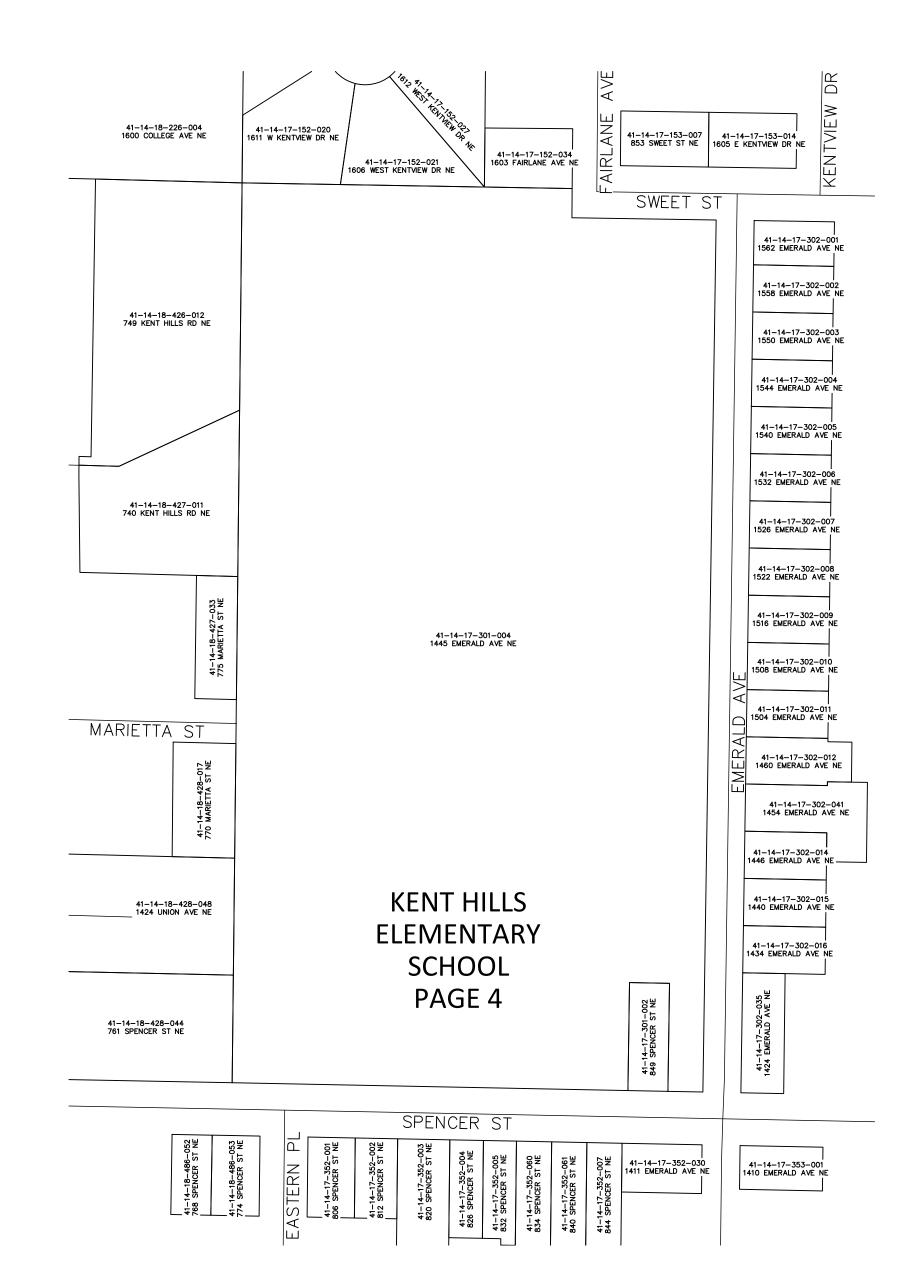


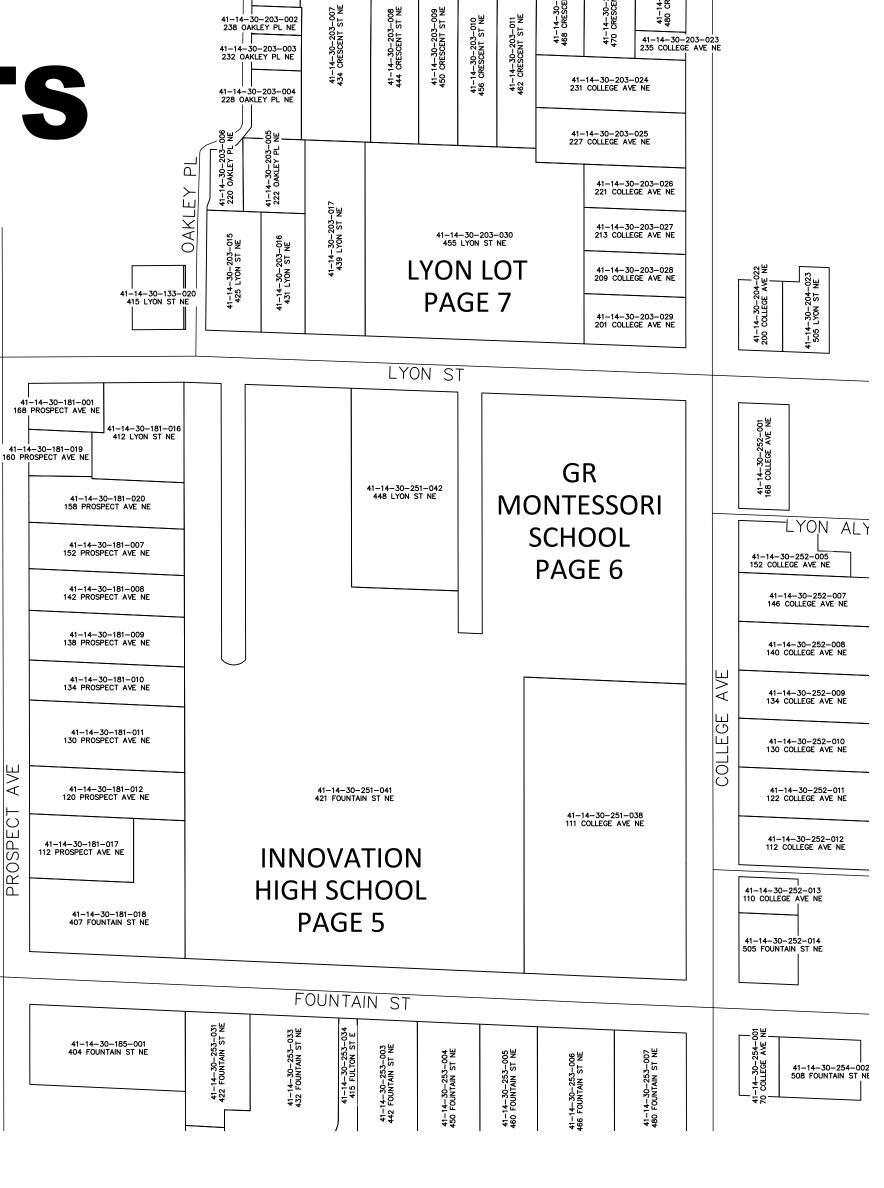
## CITY OF GRAND RAPIDS

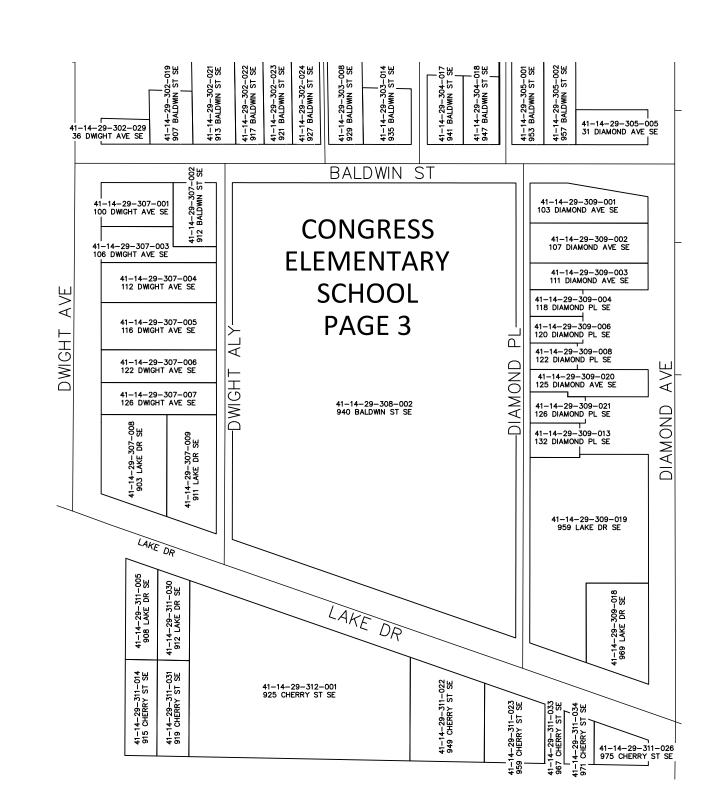
**KENT COUNTY, MICHIGAN** 

# 2025 PAVING PROJECTS









OWNER
GRAND RAPIDS PUBLIC SCHOOLS
1331 MARTIN LUTHER KING JR ST SE
GRAND RAPIDS, MI 49506
616-819-2000

DESIGN ENGINEER VK CIVIL

7885 BYRON CENTER AVE SW, STE A, BYRON CENTER, MI 49315 COLIN FINCH, P.E. 616-277-2185 COLIN@VKCIVIL.COM

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NO.	DATE	REVISION	BY
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2	8/27/2024	PROGRESS PLAN	JTR
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5	10/16/2024	FOR BIDDING	JTR

CITY OF GRAND RAPIDS, KENT COUNTY MICHIGAN

LOCATION MAP

NOT TO SCALE

GRAND RAPIDS PUBLIC SCHOOLS
CITY OF GRAND RAPIDS, MI

2025 PAVING PROJECTS

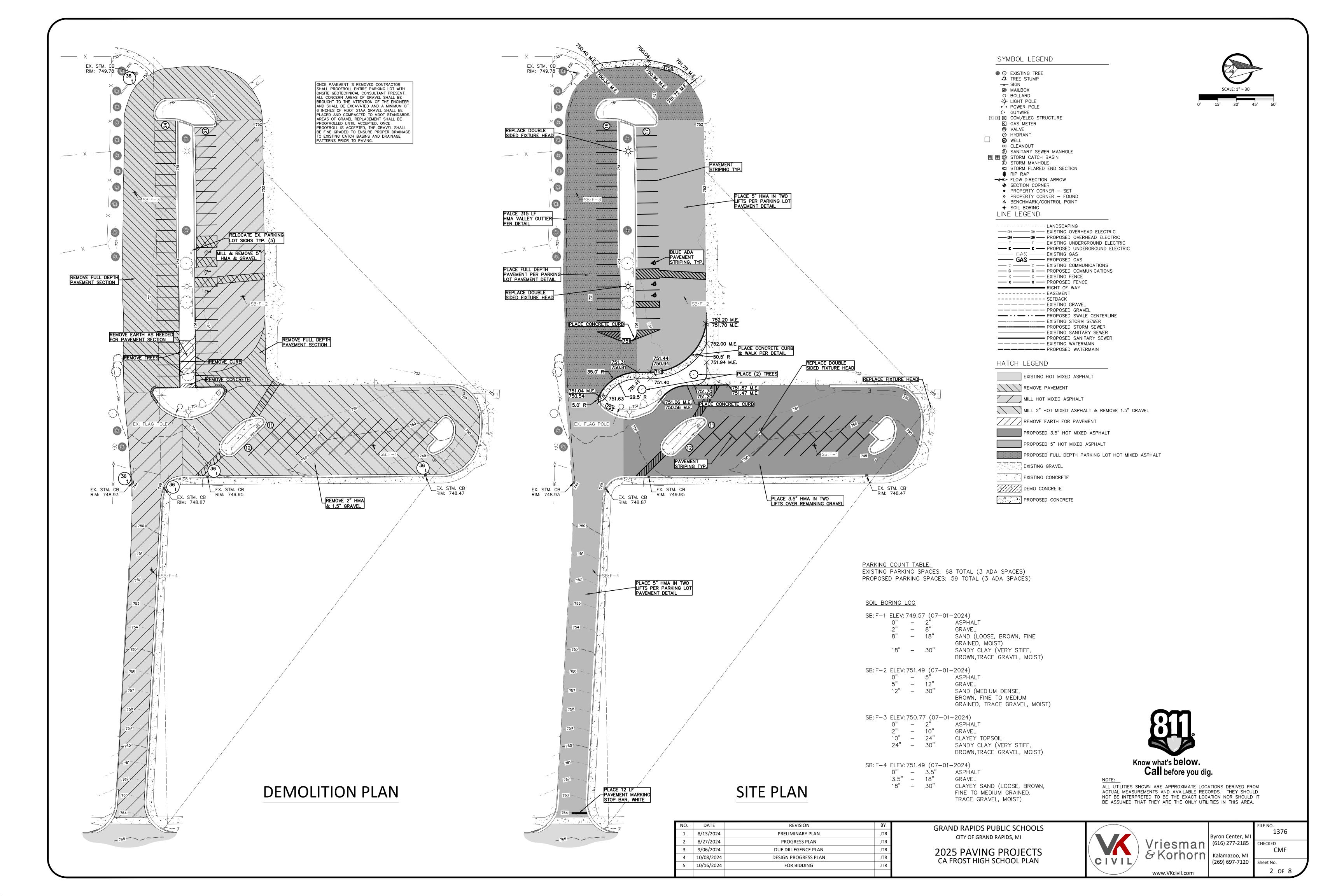
TITLE SHEET

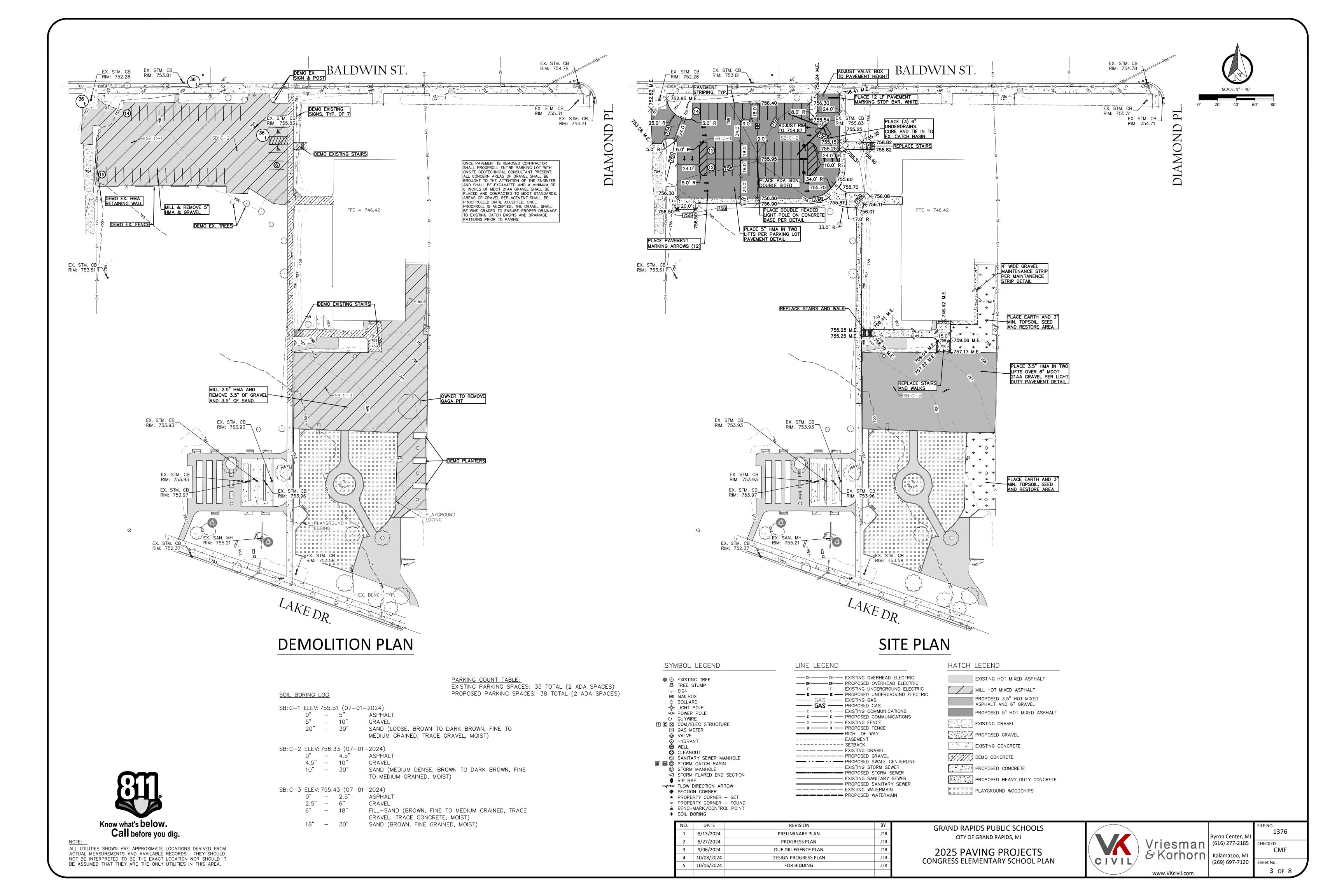
CA FROST HIGH SCHOOL

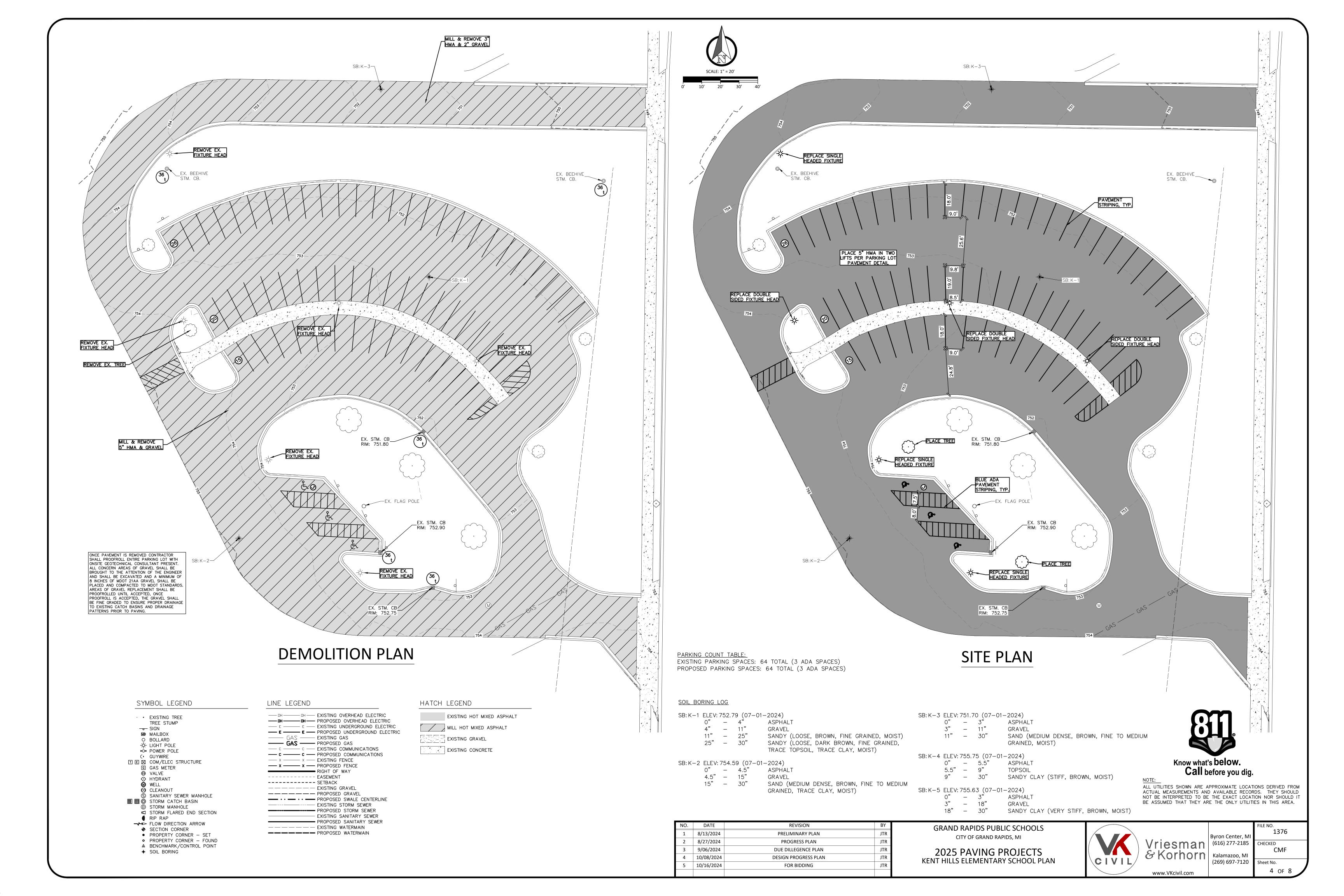
PAGE 2

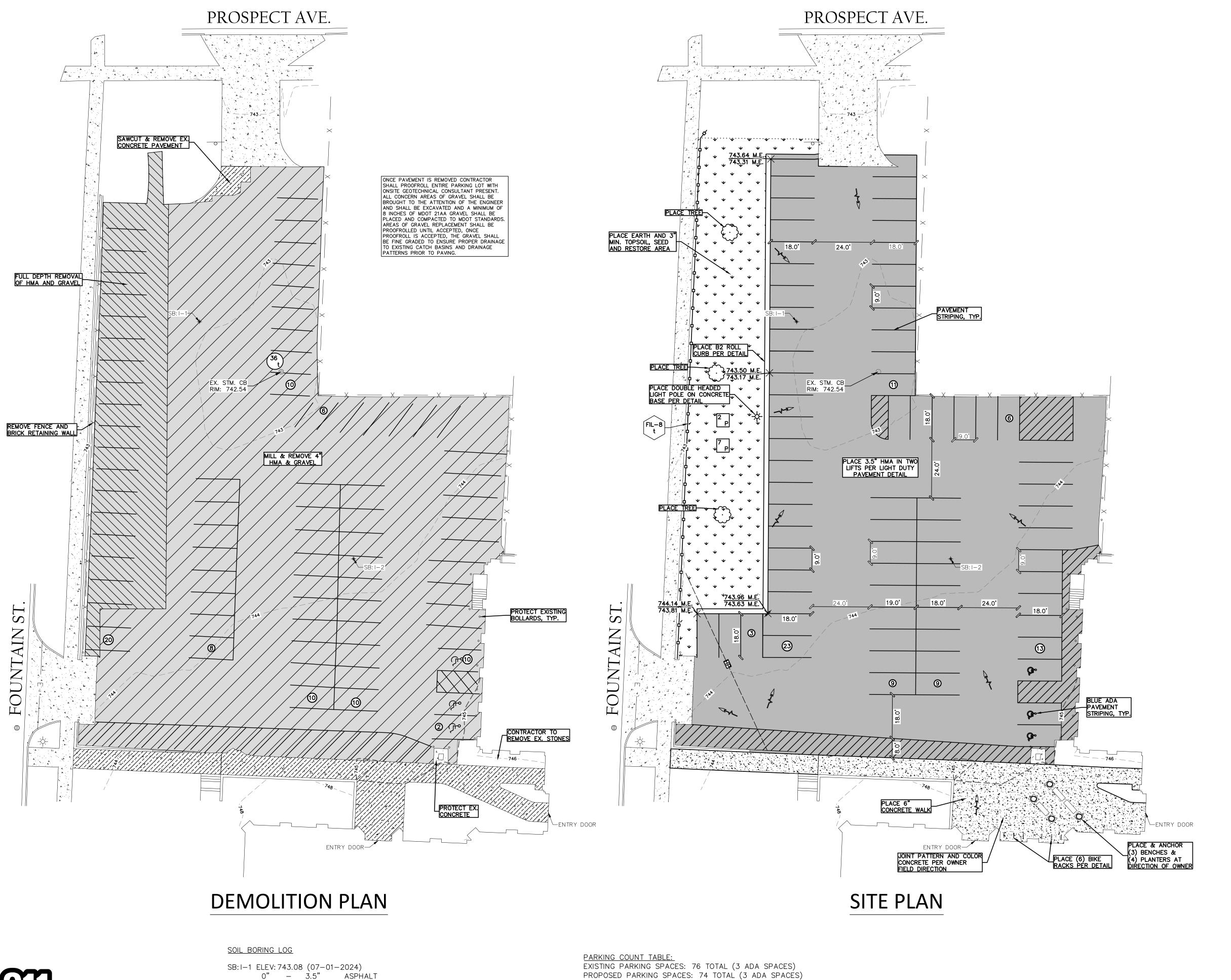


KENT HILLS ELEMENTARY SCHOOL











SYMBOL LEGEND

TREE STUMP <del>-</del> SIGN MB MAILBOX O BOLLARD POWER POLE C• GUYWIRE

T E ☑ COM/ELEC STRUCTURE GAS METER HYDRANT WELL

CLEANOUT SANITARY SEWER MANHOLE ■ ■ STORM CATCH BASIN D STORM MANHOLE RIP RAP

→ FLOW DIRECTION ARROW SECTION CORNER • PROPERTY CORNER - SET • PROPERTY CORNER - FOUND

▲ BENCHMARK/CONTROL POINT ♦ SOIL BORING

#### LINE LEGEND

---- DH ----- EXISTING OVERHEAD ELECTRIC — E — E EXISTING UNDERGROUND ELECTRIC ---- GAS ---- EXISTING GAS ---- GAS ----- PROPOSED GAS — c — c — EXISTING COMMUNICATIONS

— c — c — PROPOSED COMMUNICATIONS — x — X — EXISTING FENCE - x - PROPOSED FENCE RIGHT OF WAY

---- EASEMENT

----- SETBACK —————— EXISTING GRAVEL --- EXISTING STORM SEWER PROPOSED STORM SEWER

- EXISTING SANITARY SEWER —————— EXISTING WATERMAIN 

#### HATCH LEGEND

EXISTING HOT MIXED ASPHALT

MILL 4" HOT MIXED ASPHALT

FULL DEPTH REMOVAL & MILL HOT MIXED ASPHALT

PROPOSED 3.5" LIGHT DUTY PAVEMENT

EXISTING GRAVEL EXISTING CONCRETE

DEMO CONCRETE

PROPOSED 6" CONCRETE SIDEWALK



ALL UTILITIES SHOWN ARE APPROXIMATE LOCATIONS DERIVED FROM ACTUAL MEASUREMENTS AND AVAILABLE RECORDS. THEY SHOULD NOT BE INTERPRETED TO BE THE EXACT LOCATION NOR SHOULD IT BE ASSUMED THAT THEY ARE THE ONLY UTILITIES IN THIS AREA.

3.5" - 11" GRAVEL SANDY CLAY (VERY STIFF, BROWN TO DARK SANDY CLAY (VERY STIFF, BROWN, TRACE GRAVEL, MOIST) SB: I-2 ELEV: 743.81 (07-01-2024) ASPHALT

4" - 13"

GRAVEL FILL-CLAYEY SAND (MEDIUM DENSE, BROWN TO DARK BROWN, FINE TO MEDIUM GRAINED, TRACE GRAVEL, MOIST)

REVISION 8/13/2024 PRELIMINARY PLAN 8/27/2024 PROGRESS PLAN 9/06/2024 DUE DILLEGENCE PLAN 10/08/2024 **DESIGN PROGRESS PLAN** 10/16/2024 FOR BIDDING

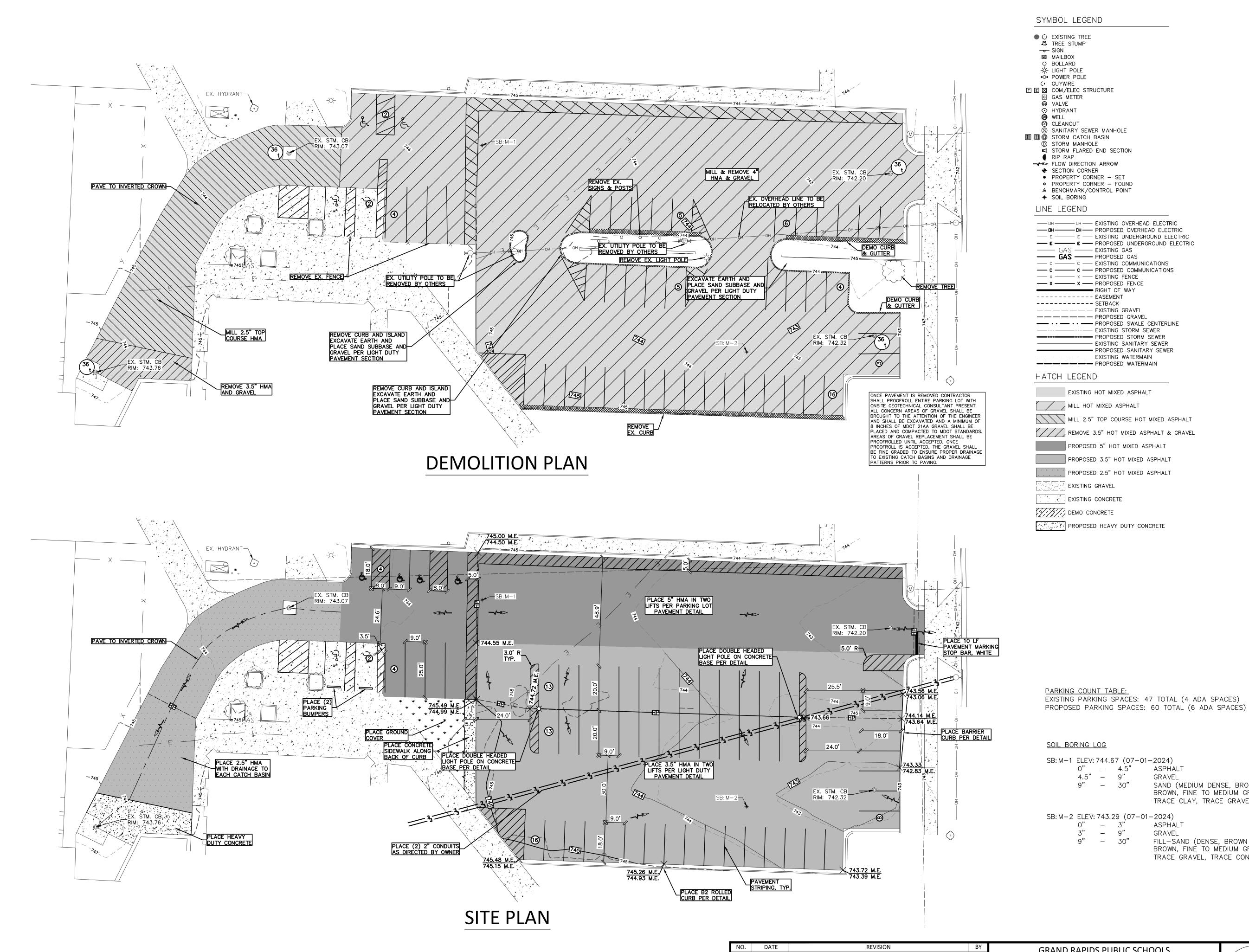
**GRAND RAPIDS PUBLIC SCHOOLS** CITY OF GRAND RAPIDS, MI

2025 PAVING PROJECTS INNOVATION HIGH SCHOOL PLAN



Byron Center, M Vriesman (616) 277-2185 CHECKED & Korhorn Kalamazoo, MI (269) 697-7120 Sheet No.

1376



8/13/2024

8/27/2024

9/06/2024

10/08/2024

10/16/2024

PRELIMINARY PLAN

PROGRESS PLAN

DUE DILLEGENCE PLAN

DESIGN PROGRESS PLAN

FOR BIDDING

EXISTING PARKING SPACES: 47 TOTAL (4 ADA SPACES)

**2025 PAVING PROJECTS** 

GR MONTESSORI SCHOOL PLAN

SAND (MEDIUM DENSE, BROWN TO DARK BROWN, FINE TO MEDIUM GRAINED, TRACE CLAY, TRACE GRAVEL, MOIST)

FILL-SAND (DENSE, BROWN TO DARK BROWN, FINÈ TO MEDIUM GRAINED, TRACE GRAVEL, TRACE CONCRETE, MOIST)



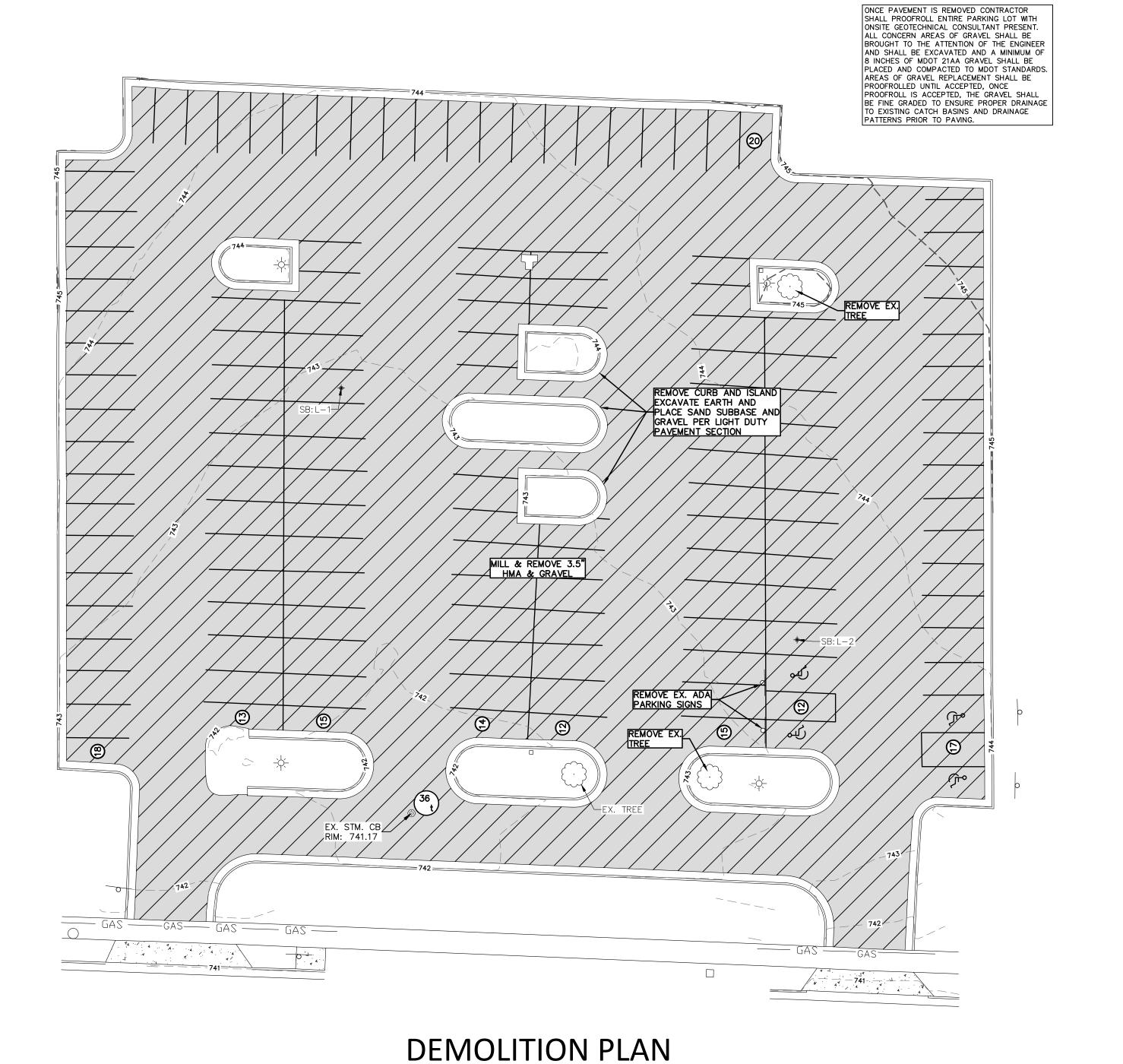
Call before you dig. ALL UTILITIES SHOWN ARE APPROXIMATE LOCATIONS DERIVED FROM ACTUAL MEASUREMENTS AND AVAILABLE RECORDS. THEY SHOULD NOT BE INTERPRETED TO BE THE EXACT LOCATION NOR SHOULD IT BE ASSUMED THAT THEY ARE THE ONLY UTILITIES IN THIS AREA.

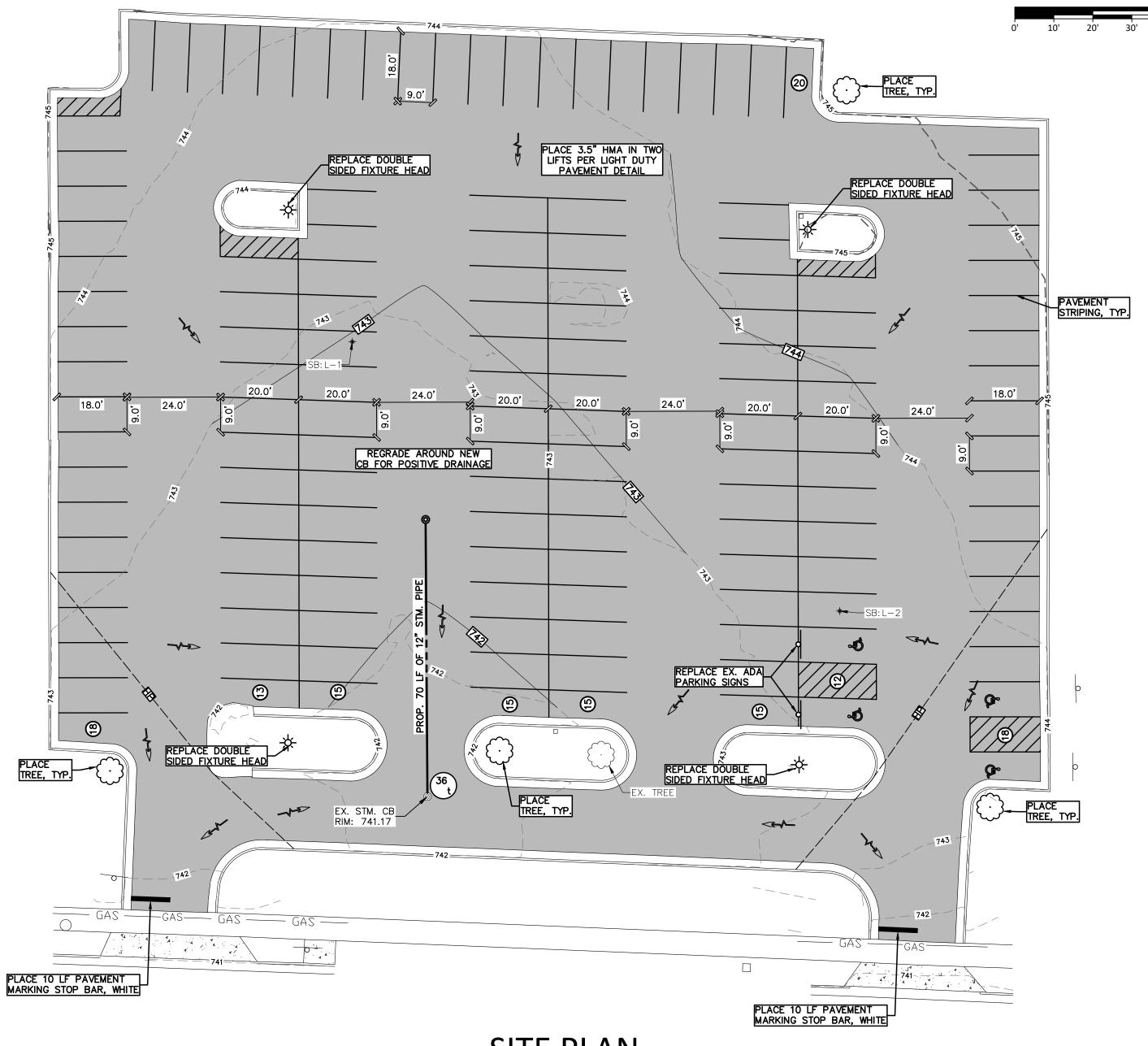
**GRAND RAPIDS PUBLIC SCHOOLS** CITY OF GRAND RAPIDS, MI

Vriesman (616) 277-2185 CHECKED & Korhorn Kalamazoo, MI www.VKcivil.com

1376 Byron Center, M

(269) 697-7120 Sheet No.





## SITE PLAN

#### SOIL BORING LOG

SB: L-1 ELEV: 742.85 (07-01-2024) 0" - 3" ASPHALT

3" – 9" GRAVEL SAND (LOOSE, BROWN TO DARK BROWN, FINE TO MEDIUM GRAINED, TRACE CLAY, TRACE GRAVEL, MOIST)

SAND (LOOSE, BROWN, FINE TO MEDIUM GRAINED, TRACE CLAY, MOIST)

SB: L-2 ELEV: 743.31 (07-01-2024)

0" - 2.5" ASPHALT 2.5" - 9" GRAVEL 9" – 18"

FILL-SAND (LOOSE, DARK BROWN, FINE TO MEDIUM GRAINED, TRACE CLAY, TRACE GRAVEL, MOIST)

SAND (LOOSE, BROWN, FINE TO MEDIUM GRAINED, TRACE CLAY, MOIST)

## SYMBOL LEGEND

 EXISTING TREE 🚨 TREE STUMP ─<mark>→</mark> SIGN

MB MAILBOX O BOLLARD •ं∙ POWER POLE

HYDRANT

SOIL BORING

C• GUYWIRE G GAS METER 

 WELL co CLEANOUT S SANITARY SEWER MANHOLE ■ ■ STORM CATCH BASIN ① STORM MANHOLE

STORM FLARED END SECTION RIP RAP → FLOW DIRECTION ARROW ♦ SECTION CORNER• PROPERTY CORNER - SET • PROPERTY CORNER - FOUND

▲ BENCHMARK/CONTROL POINT

#### LINE LEGEND

— DH — DH — EXISTING OVERHEAD ELECTRIC — E — E EXISTING UNDERGROUND ELECTRIC

E PROPOSED UNDERGROUND ELECTRIC

GAS EXISTING GAS

PROPOSED GAS — c — EXISTING COMMUNICATIONS — c — c — PROPOSED COMMUNICATIONS
— x — x — EXISTING FENCE - x - PROPOSED FENCE RIGHT OF WAY ---- EASEMENT ----- SETBACK

—————— EXISTING GRAVEL ----- EXISTING STORM SEWER PROPOSED STORM SEWER
EXISTING SANITARY SEWER PROPOSED SANITARY SEWER

—————— EXISTING WATERMAIN 

#### HATCH LEGEND

EXISTING HOT MIXED ASPHALT

MILL 3.5" HOT MIXED ASPHALT PROPOSED 3.5" HOT MIXED ASPHALT

EXISTING GRAVEL EXISTING CONCRETE

DEMO CONCRETE

PROPOSED CONCRETE

### PARKING COUNT TABLE:

EXISTING PARKING SPACES: 136 TOTAL (4 ADA SPACES) PROPOSED PARKING SPACES: 141 TOTAL (4 ADA SPACES)



ALL UTILITIES SHOWN ARE APPROXIMATE LOCATIONS DERIVED FROM ACTUAL MEASUREMENTS AND AVAILABLE RECORDS. THEY SHOULD NOT BE INTERPRETED TO BE THE EXACT LOCATION NOR SHOULD IT BE ASSUMED THAT THEY ARE THE ONLY UTILITIES IN THIS AREA.

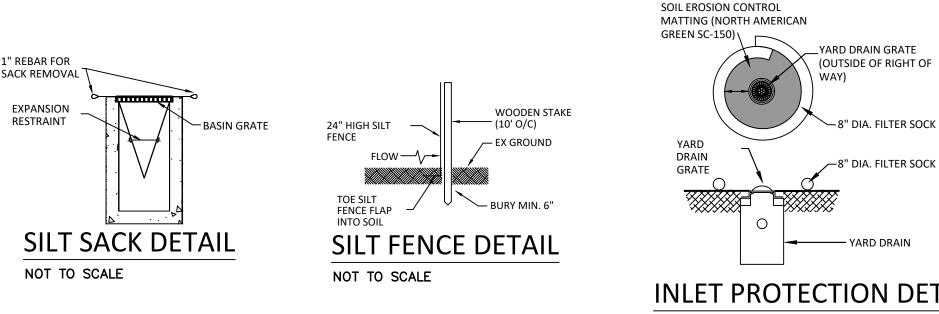
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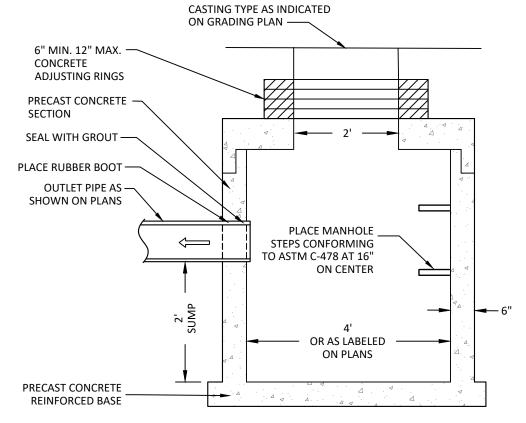
**GRAND RAPIDS PUBLIC SCHOOLS** CITY OF GRAND RAPIDS, MI

2025 PAVING PROJECTS LYON LOT PLAN

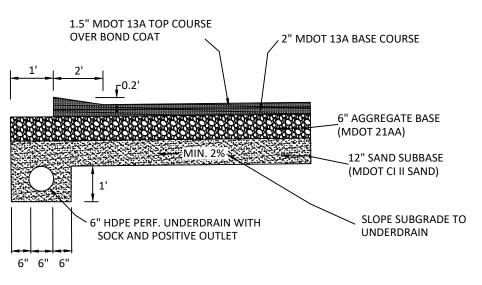


1376 Byron Center, MI Vriesman (616) 277-2185 CHECKED (269) 697-7120 Sheet No.





## CATCH BASIN DETAIL NOT TO SCALE



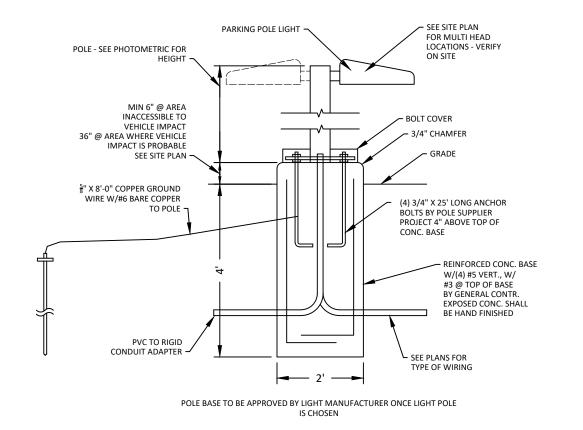
#### BIT VALLEY GUTTER DETAIL

NOT TO SCALE

4.4 · A.4 A - EPOXY COATED #4 BAR OMIT WHEN TIED TO OR CAST INTEGRAL WITH PAVEMENT

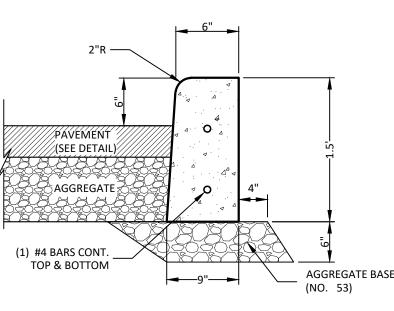
## MDOT DETAIL B2 CONCRETE CURB & GUTTER

NOT TO SCALE

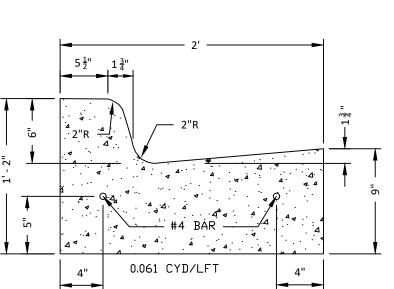


#### POLE BASE DETAIL AT GRADE NOT TO SCALE

**INLET PROTECTION DETAIL** NOT TO SCALE

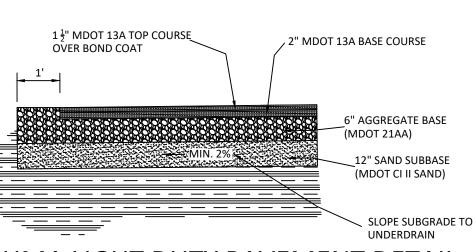


BARRIER CURB DETAIL NOT TO SCALE



MDOT DETAIL F4 **CONCRETE CURB & GUTTER** 

NOT TO SCALE



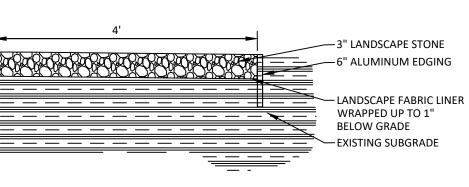
HMA LIGHT DUTY PAVEMENT DETAIL NOT TO SCALE

1. BICYCLE PARKING RACKS SHALL BE

ANCHORED TO AN APPROVED HARD SURFACE PARALLEL BIKE RACKS SHALL BE A MINIMUM

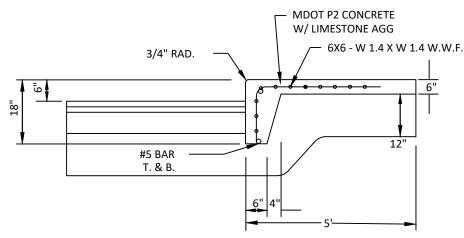
ON-CENTER SPACING OF 30". SPACING OF 48"

NOT TO SCALE



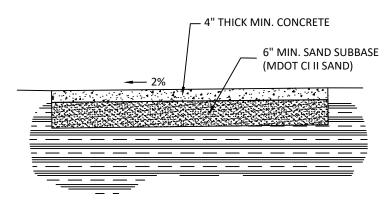
### MAINTENANCE STRIP DETAIL

NOT TO SCALE



#### CONCRETE TURNDOWN EDGE DETAIL FOR ALL RAISED CONCRETE ADJACENT TO DRIVE AREA

NOT TO SCALE



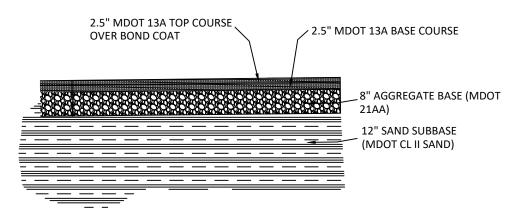
1. 1/4" WIDE TOOLED CONTRACTION JOINTS TO 1" DEPTH AT 5 FOOT INTERVALS. WHERE SIDEWALK IS PLACED ADJACENT TO CURB AND GUTTER, CONTRACTION JOINTS SHALL LINE UP WITH CURB AND GUTTER JOINTS.

ISOLATION JOINTS WHERE PAVEMENT ABUTS

PROPOSED STRUCTURES OR OTHER PAVEMENTS. EXPANSION JOINTS SHALL BE PLACED NO FURTHER THAN 40' APART. RUNNING SLOPE OF SIDEWALK TO BE LESS THAN 5% (EXCLUDING RAMPS AND LANDINGS)

#### CONCRETE SIDEWALK DETAIL

NOT TO SCALE



#### PARKING LOT PAVING DETAIL

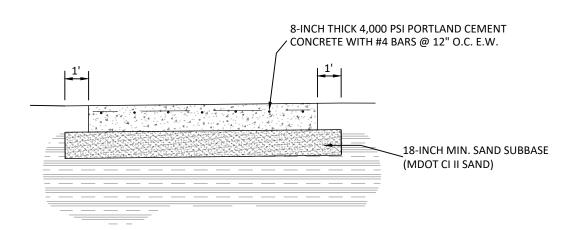
NOT TO SCALE

FRONT VIEW

TOP VIEW

**INVERTED "U" BICYCLE RACK** 

- ANCHOR BOLT HOLE



## HEAVY DUTY CONCRETE PAVEMENT DETAIL

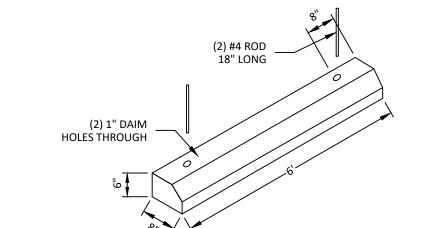
NOT TO SCALE

1. 1/4" WIDE SAWCUT CONTROL JOINTS TO 2.5" DEPTH AT 10' O.C. EACH DIRECTION WITHIN 12 HOURS OF FINISHING CONCRETE 2. ISOLATION JOINTS WHERE PAVEMENT ABUTS PROPOSED STRUCTURES OR OTHER PAVEMENTS.

9/06/2024

10/08/2024

10/16/2024



#### PARKING BUMPER DETAIL NOT TO SCALE

(APPLICABLE TO ENTIRE SITE) | TP

JTR

SELECTIVE GRADING & SHAPING, PERMANENT

- AREAS, ESPECIALLY ADJACENT TO STREAMS, PONDS, ETC. AND ALONG PROJECT UNITS.
- DENOTES GRAVEL ACCESS APPROACH. APPROACH SHALL BE INSTALLED TO PROVIDE STABLE ACCESS TO ROADWAYS AND MINIMIZE DUST AND TRACKING OF MATERIALS ONTO PUBLIC STREETS AND HIGHWAYS. THE APPROACH SHALL BE A MIN. OF 12' WIDE, 6" DEEP,

MICHIGAN UNIFIED KEYING SYSTEM (MUKS)

BEST MANAGEMENT PRACTICE (BMP)

- TEMPORARY CONTROL MEASURE (DURING CONSTRUCTION AND UNTIL PERMANENT MEASURES ARE ESTABLISHED
- P PERMANENT CONTROL MEASURE

SOIL EROSION AND SEDIMENTATION CONTROL MEASURES INDICATED ARE KNOWN OR ANTICIPATED CONTROL MEASURES NEEDED DURING TYPICAL CONSTRUCTION ACTIVITIES. ADDITIONAL CONTROL MEASURES MAY BE REQUIRED DUE TO CONSTRUCTION ACTIVITY LOCATION, SOIL TYPE, WEATHER EVENT, ETC. ALL ADDITIONAL SOIL EROSION AND SEDIMENTATION CONTROL MEASURES WILL BE INCIDENTAL TO THE CONSTRUCTION

# GENERAL SOIL EROSION MEASURES

#### REVISION DATE 8/13/2024 PRELIMINARY PLAN 8/27/2024 PROGRESS PLAN

DUE DILLEGENCE PLAN

**DESIGN PROGRESS PLAN** 

FOR BIDDING

**GRAND RAPIDS PUBLIC SCHOOLS** 

**2025 PAVING PROJECTS** PROJECT DETAILS



/riesman & Korhorn

1376 Sheet No.

CITY OF GRAND RAPIDS, MI

Byron Center, N (616) 277-2185 CHECKED Kalamazoo, M (269) 697-7120

FOR SALVAGE AND REUSE OR REPLACED 6) ROOF DRAINS, FOUNDATION DRAINS, AND OTHER CLEAN WATER CONNECTIONS TO THE SANITARY SEWER ARE PROHIBITED.

EQUAL, UNLESS OTHERWISE LABELED ON THE PLANS.

UTILITY PLAN NOTES:

APPROVED EQUAL.

7) CATCH BASINS WITHIN CONCRETE HEAD CURB SHALL HAVE EJ 7045 CASTINGS. b) CATCH BASINS WITHIN BIT VALLEY CURB SHALL HAVE EJ 7065 CASTINGS WITH M1 GRATE.

1) CONTRACTOR SHALL CONTACT PRIVATE AND PUBLIC UTILITY COMPANIES IF ANY

SHALL FIELD VERIFY FOR ACCURACY, LOCATION, AND CONDITION.

COORDINATION IS NEEDED BETWEEN PROPOSED WORK AND EXISTING UTILITIES.

2) UTILITIES SHOWN (IF ANY) ARE APPROXIMATE LOCATIONS DERIVED FROM MEASUREMENTS

OR AVAILABLE RECORDS. THIS MAP IS NOT TO BE INTERPRETED AS SHOWING EXACT

4) ALL STORM SEWER SHALL BE SMOOTH LINED CORRUGATED PLASTIC PIPE, ADS N-12 OR

RESPONSIBILITY FOR THE ACCURACY OF EXISTING UTILITY INFORMATION. THE CONTRACTOR

GRADE SHALL BE FIELD VERIFIED AT THE TIME OF CONSTRUCTION AND MARKED SUITABLE

LOCATIONS OR SHOWING ALL UTILITIES IN THE AREA. THE ENGINEER ASSUMES NO

3) ALL 6" UNDERDRAIN TO BE CORRUGATED PLASTIC PIPE WITH SOCK, ADS N-12 OR

5) ALL EXISTING CASTINGS FOR STRUCTURES TO BE ADJUSTED OR RECONSTRUCTED TO

SITE LAYOUT NOTES:

REGULATIONS.

BROOM FINISH.

BENCHMARKS.

MUNICIPALITY

INCHES TALL.

GRADING PLAN NOTES:

EXCESSIVE EROSION

SEDIMENT CONTROL PERMIT.

1 ON 3 OR GREATER AFTER.

REQUIREMENTS IF APPLICABLE.

THE ENGINEER.

JURISDICTION REQUIREMENTS.

ACTIVITIES TO MATCH EXISTING CONDITIONS

ALLOWED UNLESS APPROVED BY OWNER.

MISS DIG AT 1-800-482-7171 OR 811.

SPACES WITH 4" BLUE PAINT AND SIGNS PER MMUTCD.

SHALL BE BROUGHT TO THE ENGINEER'S ATTENTION.

10) ALL SIGNAGE SHALL BE PER MDOT AND MMUTCD STANDARDS.

INSURANCE, OR OTHER FEES ASSOCIATED WITH CONSTRUCTION.

AMERICANS WITH DISABILITIES ACT.

ELECTRONIC DATA ARE DISCOVERED.

REMOVAL OR DISTURBANCES OUTSIDE LIMITS.

PLACED OUTSIDE OF THE LIMITS OF DISTURBANCE.

MUST COMPLY WITH LOCAL MUNICIPAL ORDINANCES.

STREETS WITHOUT PRIOR APPROVAL

1) ALL WORK SHALL BE DONE TO ALL FEDERAL, STATE, AND LOCAL LAWS, RULES, AND

3) CONTRACTOR SHALL RESTORE ALL STREET SURFACES, DRIVEWAYS, CULVERTS, ROADSIDE

4) ALL DEBRIS SHALL BE REMOVED FROM THE SITE, AND NO STOCKPILING ON SITE SHALL BE

5) THE CONTRACTOR SHALL LIMIT SAWCUT AND PAVEMENT REMOVAL TO ONLY THOSE AREAS

WHERE REQUIRED OR AS SHOWN. ALL PAVEMENTS TO BE REMOVED SHALL BE SAWCUT

AND REMOVED TO FULL DEPTH AT ALL PAVEMENT LIMITS OR EXISTING JOINTS. IF ANY

7) ALL WORK SHALL BE DONE TO THE MICHIGAN HANDICAPPED ACCESSIBILITY CODE AND THE

8) ADA PARKING SPACES SHALL BE MARKED WITH APPROVED PAVEMENT SYMBOL. MARK ADA

STANDARDS. IF IT IS DISCOVERED THAT ANY ITEMS WILL NOT MEET ADA STANDARDS IT

DEMOLITION PERMITS, TAP FEES, ASSESSMENTS, UTILITY PERMITS, ROW PERMITS, BONDS,

12) SITE CONCRETE TO HAVE A COMPRESSIVE STRENGTH OF A MINIMUM 4000 PSI AND SHALL

HAVE LIMESTONE AGGREGATE AND SHALL HAVE A 5.5%-8% AIR ENTRAINMENT WITH A

13) INSTALL EXPANSION JOINTS AT ALL LOCATIONS WHERE CONCRETE ABUTS HMA PAVEMENT. 14) CONTRACTOR SHALL REVIEW THE GEOTECHNICAL AND ENVIRONMENTAL REPORTS FOR THE

DIMENSIONS SHOWN ARE FOR GRAPHIC PRESENTATION ONLY AND SHOULD NOT BE USED

FOR LAYOUT. CONTACT THE ENGINEER IF ANY DISCREPANCIES BETWEEN THE PLAN AND

16) THE WORK LIMITS SHOWN ON THESE PLANS ARE FOR PHYSICAL CONSTRUCTION ONLY. THE

REQUIRED TO PERFORM THE WORK. THE INSTALLATION AND OPERATION OF ALL

CONTROLS SHALL BE COORDINATED WITH THE LOCAL POLICE DEPARTMENT AND

20) NO PARKING OF CONTRACTOR OR SUBCONTRACTORS SHALL BE ALLOWED ON PUBLIC

21) NO BUILDING MATERIAL, EQUIPMENT, VEHICLES, OR CHEMICALS SHALL BE STORED OR

22) CONSTRUCTION NOISE SHALL BE KEPT TO A MINIMUM DURING NIGHTTIME HOURS AND

23) ALL VERTICAL FACE OF CURBS SHALL BE PAINTED YELLOW WHEN BETWEEN 0 AND 6

BE EITHER SHADEMASTER HONEYLOCUST, WHITE OAK, RED MAPLE, OR LINDEN.

24) ALL NEW TREES SHALL BE 4" CALIPER MIN. SINGLE TRUNK SHADE TREES. SPECIES SHALL

PROTECTED AGAINST ANY DETRIMENTAL CHANGES IN CONDITION SUCH AS FROM

THE FOOTING EXCAVATIONS SHOULD BE ADEQUATELY PROTECTED

COVER, THESE COVER AREAS ACT AS SEDIMENT FILTERS.

10) ALL NON PAVED AREAS TO BE TOPSOILED (6" MIN.) & SEEDED

UNUSABLE SOILS ARE ENCOUNTERED DURING CONSTRUCTION.

END OF EACH WORK DAY OR AS REQUIRED DURING THE WORK DAY.

MDEQ OR ANY OTHER GOVERNMENT AGENCY

REQUIRED FOR FINAL CLEAN UP AND APPROVAL

SOILS EXPOSED IN THE BASE OF ALL SATISFACTORY FOUNDATION EXCAVATIONS SHOULD BE

DISTURBANCE, RAIN AND FREEZING, SURFACE RUN-OFF WATER SHOULD BE DRAINED AWAY

FROM THE EXCAVATION AND NOT ALLOWED TO POND. IF POSSIBLE, ALL FOOTING CONCRETE

SHOULD BE POURED THE SAME DAY THE EXCAVATION IS MADE. IF THIS IS NOT PRACTICAL,

3) ALL CONSTRUCTION METHODS SHALL BE DONE IN COMPLIANCE WITH MDOT-EGLE. THE OWNER

OF CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLYING WITH ALL REQUIREMENTS OF THE CITY "SOIL EROSION PERMIT" AND FOR ALL CERTIFIED STORM WATER INSPECTION SERVICE REQUESTED BY THE "PERMIT BY RULE." EROSION CONTROL MEASURES

SHOWN ON THE PLANS ARE THE MINIMUM REQUIREMENTS AND SHALL NOT RELIEVE THE CONTRACTORS RESPONSIBILITY FOR PROVIDING ALL REQUIRED EROSION CONTROL MEASURES. ) AVOID UNNECESSARY DISTURBING OR REMOVING OF EXISTING VEGETATED TOPSOIL OR EARTH

5) ALL TEMPORARY SOIL EROSION PROTECTION SHALL REMAIN IN PLACE UNTIL REMOVAL IS

6) GEOTEXTILE SILT FENCE SHALL BE INSTALLED AS REQUIRED WHEN CROSSING CREEKS OR

WHEN ADJACENT TO WETLANDS OR SURFACE WATER BODIES TO PREVENT SILTATION AND ELSE WHERE AS DIRECTED BY THE ENGINEER. SEEDING AND/OR SODDING SHALL BE

INSTALLED ON CREEK BANKS IMMEDIATELY AFTER CONSTRUCTION TO PREVENT EROSION.

CONTRACTOR SHALL TAKE PRECAUTIONS TO AVOID TRACKING SOIL ONTO ADJACENT

ANY DISTURBED AREA WHICH WILL BE LEFT UNWORKED 20 DAYS OR LONGER MUST BE

11) VARIATION IN EXISTING SOIL CONDITIONS MAY IMPACT THE EARTHWORK QUANTITIES IF

SWEEPING DEVICE TO MAINTAIN ALL ROADWAYS BEING USED FOR ACCESS TO THE

12) DUST CONTROL: THE CONTRACTOR SHALL SUPPLY ALL LABOR, MATERIALS, AND EQUIPMENT

NECESSARY SUCH AS CALCIUM CHLORIDE, WATER OR A MOTORIZED DUST-FREE STREET

3) IF MUD, SOIL OR OTHER DEBRIS IS DEPOSITED ON ADJACENT STREETS, ROADS OR OTHER

4) STORMWATER POLLUTION PREVENTION ITEMS SHALL BE IN PLACE PRIOR TO COMMENCING

CLEARING OPERATIONS, EARTHWORK GRADING, OR ANY OTHER TYPE OF CONSTRUCTION

17) MULCH BLANKETS SHALL BE PLACED, STAPLED, AND OVERLAPPED ON ALL SLOPES THAT ARE

18) CONTRACTOR TO INSTALL SILT SACK IN ALL CATCH BASINS ONCE THEY ARE CONSTRUCTED.

19) ALL SOIL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSPECTED BY A CERTIFIED

STORM WATER OPERATOR AND MAINTAINED BY CONTRACTOR EVERY 7 DAYS AND AFTER

20) EROSION CONTROL MEASURES SHALL REMAIN IN PLACE UNTIL VEGETATION IS ESTABLISHED. 21) BEST MANAGEMENT PRACTICES WILL BE UTILIZED DURING AND AFTER CONSTRUCTION OF THE

PROJECT. MEASURES WILL INCLUDE THE USE OF SILT FENCING, SEEDING AND MULCHING,

22) ANY POND AREA LABELED AS "INFILTRATION" OR "RETENTION" SHALL BE CONSTRUCTED IN  $\prime$ 

NECESSARY, EXCAVATE BASIN BOTTOM TO AN UNCOMPACTED SUBGRADE FREE OF RACKS AND DEBRIS AND ENSURE A SANDY BOTTOM. DO NOT COMPACT SUBGRADE. SEED AND STABILIZE THE BASIN WITH AN MOOT TDS SEED MIXTURE OR MEADOW MIX AS APPROVED B'

SEDIMENT INLET FILTERS, COMPACTION AND PAVING. THE OWNER OF THE SUBJECT PARCEL

SHALL HAVE THE RESPONSIBILITY TO MAINTAIN THE PERMANENT SOIL EROSION PROTECTION

MANNER AS TO MINIMIZE COMPACTION OF EXISTING SUBGRADE. CONTRACTOR SHALL PROTECT AREA FROM COMPACTION PRIOR TO INSTALLATION AND THROUGHOUT CONSTRUCTION. IF

15) CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLYING WITH THE SOIL EROSIONS AND

16) PLACE TEMPORARY EROSION CONTROL MEASURES PRIOR TO EARTH MOVING ACTIVITIES.

EVERY SIGNIFICANT RAIN EVENT IN ACCORDANCE WITH NPDES PERMIT BY RULE

CONSTRUCTION SITE AND SHALL ADHERE TO ALL ORDINANCES OF THE TOWNSHIP, COUNTY,

PROPERTY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF SUCH AT THE

SEEDED TO ESTABLISH VEGETATION FOR TEMPORARY STABILIZATION. BASINS TO BE SEEDED AND MULCH BLANKETS APPLIED IMMEDIATELY TO PROVIDE A STABLE BASE AND AVOID

ALL SOIL EROSION CONTROL MEASURES ARE TO BE IN PLACE PRIOR TO THE START OF ANY

ROADWAYS. CONTRACTOR SHALL SWEEP IMMEDIATELY IF THIS OCCURS.

SHALL BE RESPONSIBLE FOR OBTAINING A "SOIL EROSION PERMIT" FROM THE CITY AND A

"PERMIT BY RULE /NOTICE OF COVERAGE" FROM EGLE IF APPLICABLE. PRIOR TO THE START

REMOVE ALL SUBGRADE MATERIAL THAT MAY BE SOFTENED BY RAINS, FREEZING, OR

CONSTRUCTION TRAFFIC, ETC, AND REPLACE WITH COMPACTED GRANULAR FILL

17) THE CONTRACTOR SHALL PROTECT LOCATION OF ALL PROPERTY MARKERS AND

CONTRACTOR SHALL PROVIDE ALL NECESSARY LIGHTS. BARRICADES. FLAGMEN. ETC. AS

TEMPORARY TRAFFIC CONTROL AND TEMPORARY TRAFFIC CONTROL DEVICES SHALL BE PROVIDED BY THE CONTRACTOR WHETHER INSIDE OR OUTSIDE THESE WORK LIMITS.

18) THE CONTRACTOR IS RESPONSIBLE FOR ALL SIGNS, BARRICADES, AND SAFETY FENCES TO

THE FLOW OF VEHICULAR AND PEDESTRIAN TRAFFIC AROUND THE JOB SITE. TRAFFIC

19) PRIOR TO CONSTRUCTION OR GRADING A PROTECTIVE BARRIER, FENCE, POST, AND SIGNS

CLEARLY INDICATING LIMITS OF DISTURBANCE SHALL BE INSTALLED INDICATING NO TREE

DETER PEOPLE FROM ENTERING THE WORK AREA AND FOR MAINTAINING AND PROTECTING

SITE AND INCORPORATE INTO THEIR CONSTRUCTION MEANS AND METHODS.

15) THESE PLANS HAVE BEEN DEVELOPED FOR ELECTRONIC FIELD SURVEY LAYOUT.

11) THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS, PERMIT COSTS,

6) CONTRACTOR SHALL CONTACT MISS DIG THREE WORKING DAYS BEFORE YOU DIG. CALL

DAMAGE IS INCURRED TO ANY OF THE SURROUNDING PAVEMENT, THE CONTRACTOR SHALL

DRAINAGE, AND OTHER INFRASTRUCTURE DISTURBED OR DAMAGED DUE TO CONSTRUCTION

2) ALL WORK WITHIN ROW SHALL BE DONE IN ACCORDANCE WITH LOCAL ROADWAY

BE RESPONSIBLE FOR ITS REMOVAL AND REPAIR AT NO ADDITIONAL COST.

9) CONTRACTOR SHALL ENSURE ALL ADA RAMPS AND ACCESS MEET CURRENT ADA

9) CATCH BASINS WITHIN PAVED AREAS SHALL HAVE EJ 1020M1 RADIAL FLATE GRATE CASTINGS. 10) STORM SEWER MANHOLES SHALL HAVE EJ 1020 CASTINGS WITH SOLID COVERS.

11) STORM SEWER YARD DRAINS SHALL HAVE EJ 6508 CASTINGS. 12) ROOF DRAINS SHALL BE PVC SCH-40. 13) CONTRACTOR IS TO UNCOVER AND VERIFY ALL TAP LOCATIONS AND INVERTS. LOCATION

AND INVERT DISCREPANCIES SHALL BE BROUGHT TO THE ENGINEERS ATTENTION FOR RESOLUTION PRIOR TO CONTINUING WORK.

14) SANITARY AND STORM STRUCTURES SHALL BE PRECAST AND HAVE A MAXIMUM OF 2 ADJUSTING RINGS FOR FINISH GRADE ADJUSTMENT.

15) THE CONTRACTOR SHALL MAINTAIN EXISTING UTILITY SERVICE TO ALL ADJOINING PROPERTIES.

### CONTROL MEASURE KEY

- HYDROSEEDING, PERMANENT. TYPICAL IN ALL NON-PAVED AREAS DISTURBED BY CONSTRUCTION ACTIVITIES
- AGGREGATE COVER, TEMPORARY. TYPICAL ON ALL STREETS DISTURBED BY CONSTRUCTION ACTIVITIES
- PAVING, PERMANENT, TYPICAL ON ALL STREETS DISTURBED BY CONSTRUCTION ACTIVITIES.
- SILTSACK, TEMPORARY, TYPICAL AT ALL CATCH BASINS WITHIN OR DISTURBED BY CONSTRUCTION ACTIVITIES
- FILTER BMP EXHIBIT 8A, SILT FENCE, TEMPORARY. TYPICAL IN ALL
- TREE PROTECTION, INCLUDES TUNNELING UNDER TREES, TYPICAL FOR ALL TREES ENCOUNTERED UNLESS TREE REMOVAL IS DIRECTED BY THE ENGINEER.
- AND CONSIST OF 2"-4" AGGREGATE