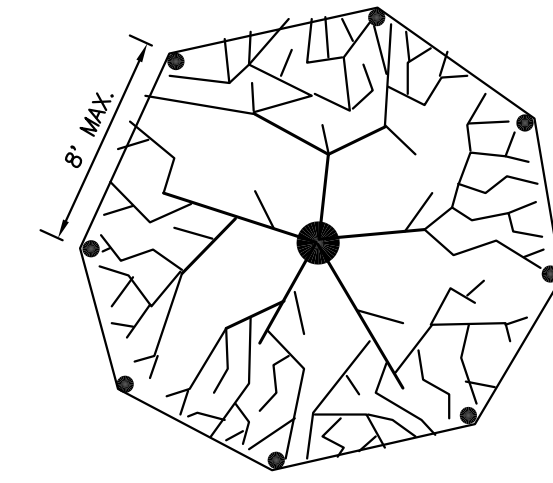
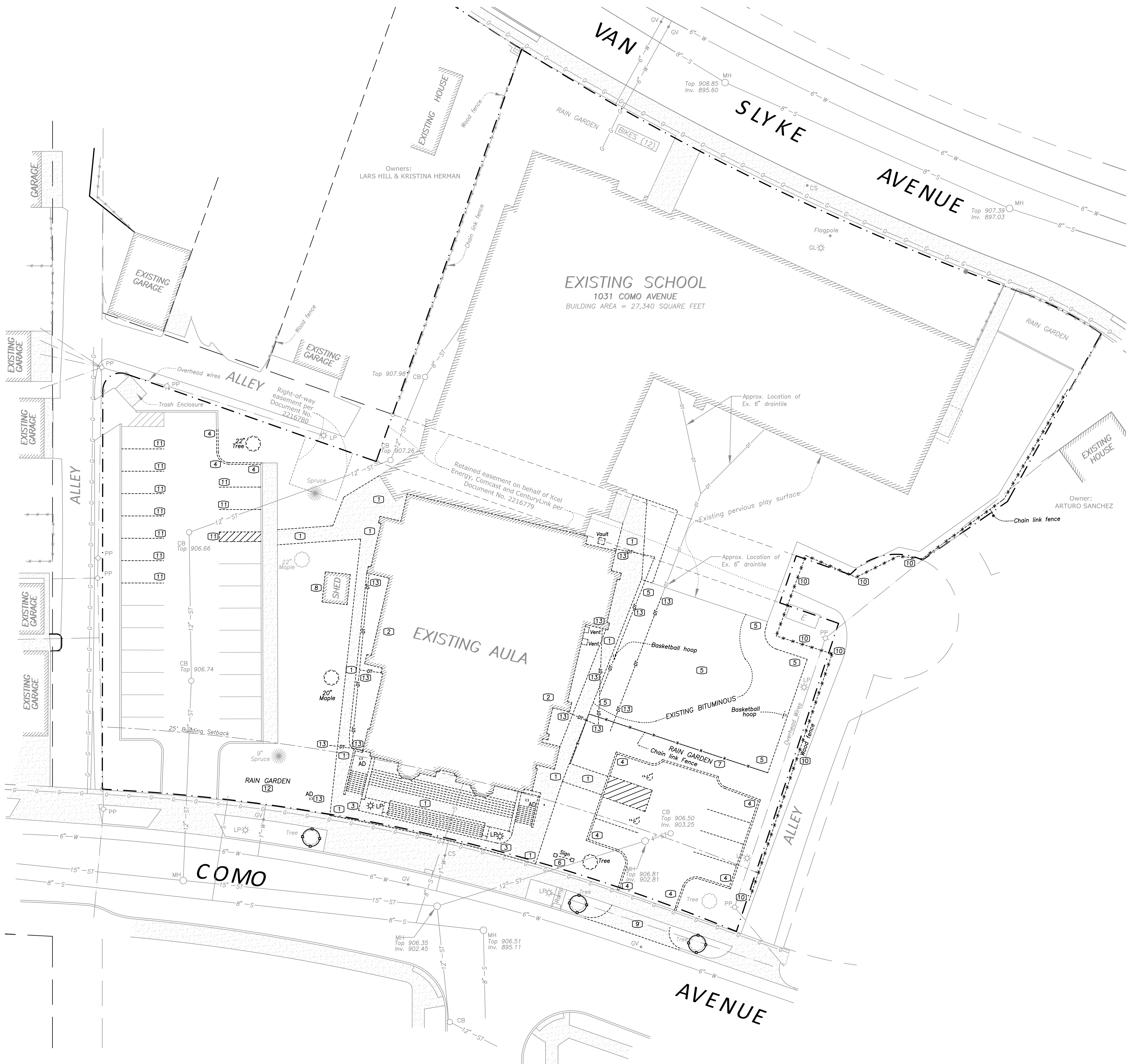




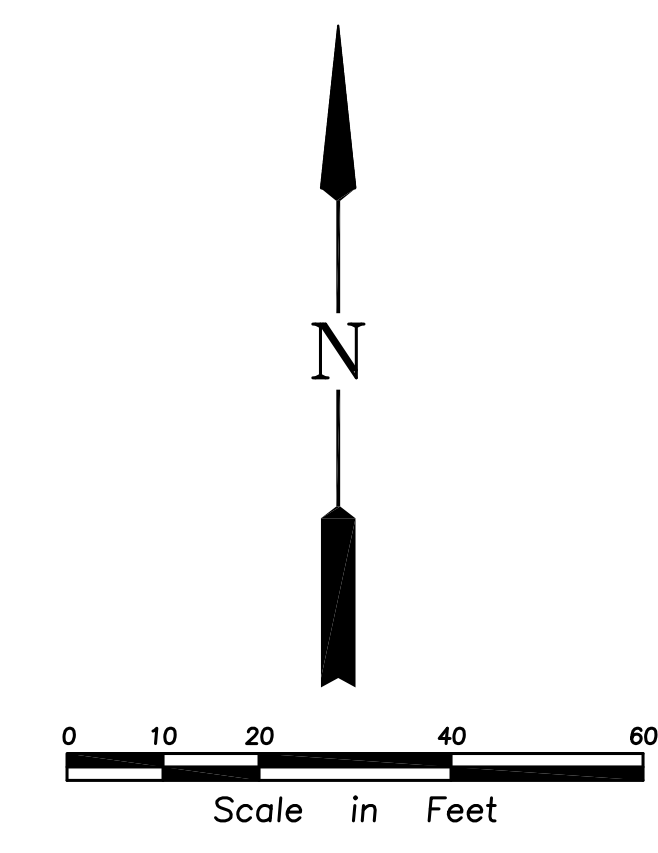
4' SNOW FENCE WITH POST 8' ON CENTER TO BE PLACED AROUND TREE AT THE DRIP LINE OF THE OUTER MOST BRANCHES.

1
CO TREE PROTECTION
NO SCALE

- DEMOLITION NOTES
- 1 - Remove concrete pavement
 - 2 - Remove building and canopies
 - 3 - Remove light poles
 - 4 - Remove concrete curb & gutter
 - 5 - Remove bituminous pavement
 - 6 - Remove sign
 - 7 - Remove rain garden
 - 8 - Relocate shed (coordinate with Owner)
 - 9 - Remove concrete driveway apron and all base material under it
 - 10 - Remove fence and salvage for reuse
 - 11 - Remove striping
 - 12 - Remove rain garden as required to allow for construction of building addition
 - 13 - Remove drain tile pipe and area drains

NOTE: SEE ARCHITECTURAL FOR DEMOLITION OF EXISTING BUILDING

- LEGEND
- BOUNDARY/ROW/BLOCK LINE
 - EASEMENT
 - BUILDING/PARKING SETBACK LINE
 - SILT FENCE
 - CONCRETE TO BE REMOVED
 - EXISTING TREE TO BE REMOVED
 - EXISTING WATERMAIN
 - EXISTING SANITARY SEWER
 - EXISTING STORM SEWER
 - EXISTING BURIED GAS LINE
 - EXISTING BURIED ELECTRIC LINE
 - EXISTING BURIED COMMUNICATION LINE
 - EXISTING DRAINTILE PIPE



Rehder & Associates, Inc.
Civil Engineers, Planners and Land Surveyors
3440 Federal Drive, Suite 110 • Eagan, Minnesota 55122
651-492-5051 • Fax: 651-492-9797 • email: info@rehder.com

PROJECT NO.: 161-3062.011 DRAWING FILE: 3062011.DWG

I hereby certify that this plan was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Name: Benton G. Ford Date: 5-21-19 Reg. No.: 24392

10-23-18	CITY SITE PLAN REVIEW
11-29-18	SPR RESUBMITAL
2-14-19	ADDRESS CITY COMMENTS
5-21-19	ADDRESS CITY COMMENTS

SITE DEMOLITION PLAN

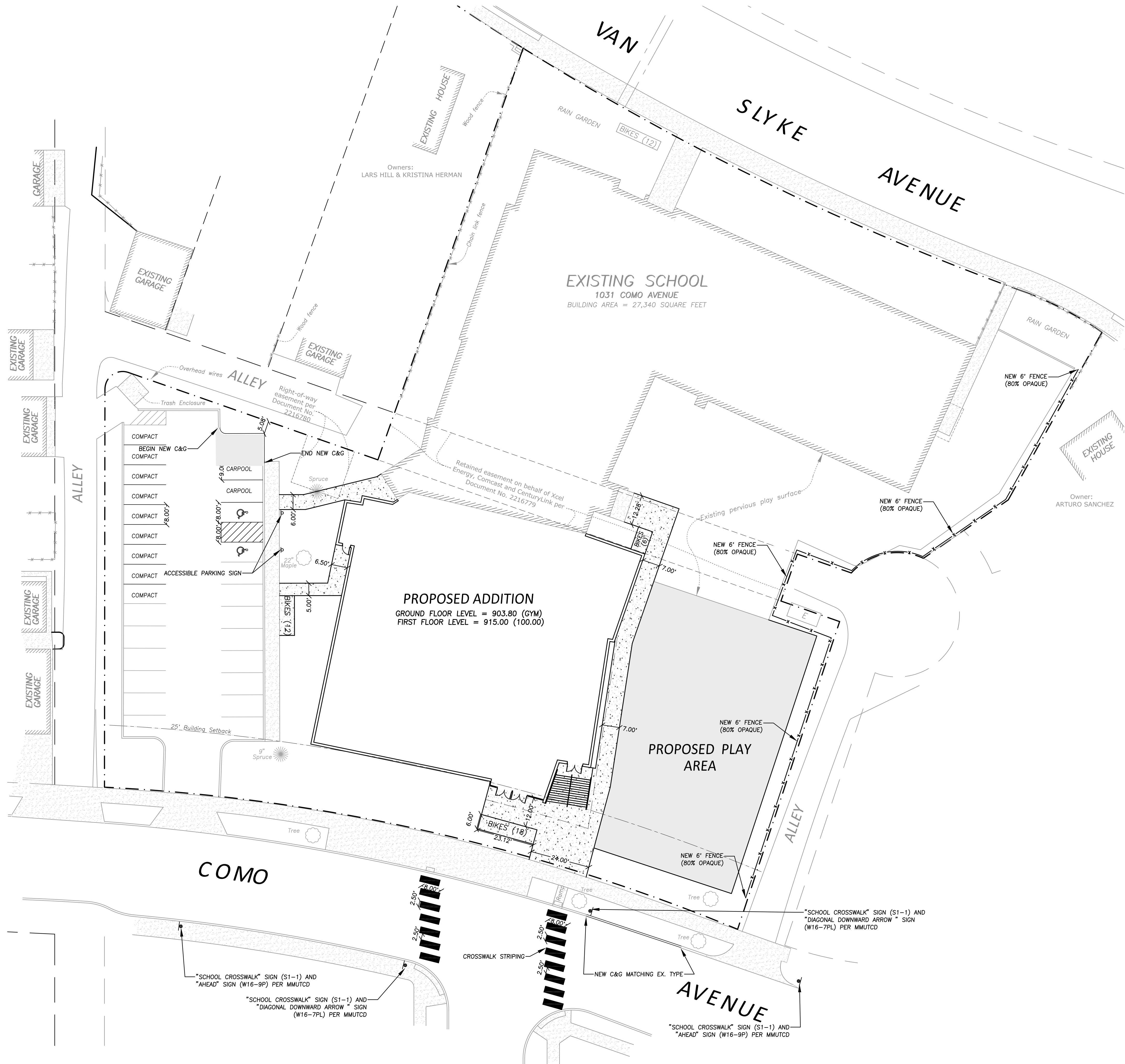
TWIN CITIES GERMAN IMMERSION SCHOOL

IMMERSION SCHOOL

CITY OF ST. PAUL

SHEET NUMBER

CO



SITE DATA
SITE AREA = 77,471
PRINCIPAL BUILDING COVERAGE = 30,290/77,471 = 39.1%

PARKING STALLS REQUIRED	
	FTE STALLS
SCHOOL STAFF (FTE)	86.5
TOTAL	86.5 X 1 STALL/FTE = 87

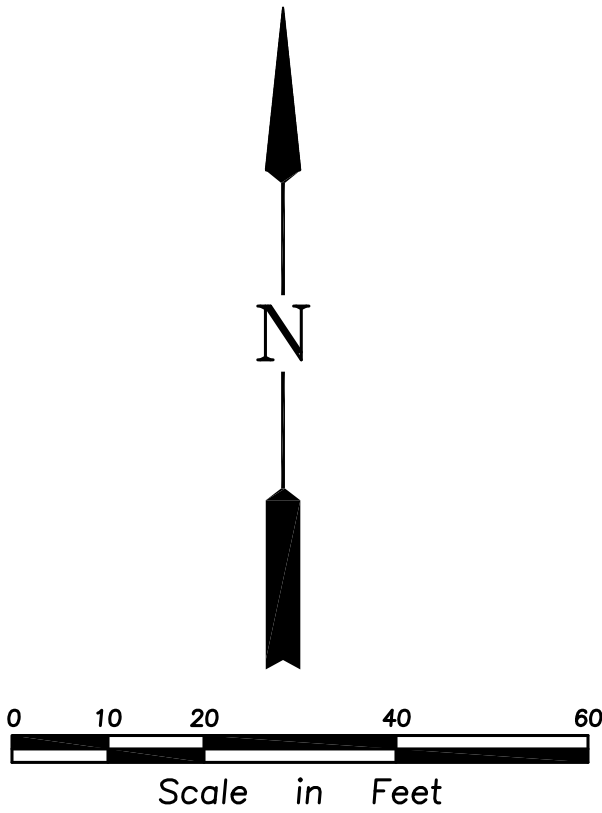
BICYCLE PARKING REQUIRED
1 BICYCLE SPACE PER 20 PARKING STALLS
28 PARKING STALLS / 20 = 1.4 OR 2 BICYCLE SPACES REQUIRED

BICYCLE PARKING PROVIDED	
TOTAL STALLS REQUIRED	87 STALLS
10% SUBSTITUTION	87 X 0.10 = 8.7 or 9 STALLS
4 BICYCLE SPACES PER STALL	9 X 4 = 36 BICYCLE SPACES REQUIRED
EX. BICYCLE SPACES PROVIDED	12 BICYCLE SPACES
PROP. BICYCLE SPACES PROVIDED	36 BICYCLE SPACES
TOTAL BICYCLE SPACES PROVIDED	48 BICYCLE SPACES

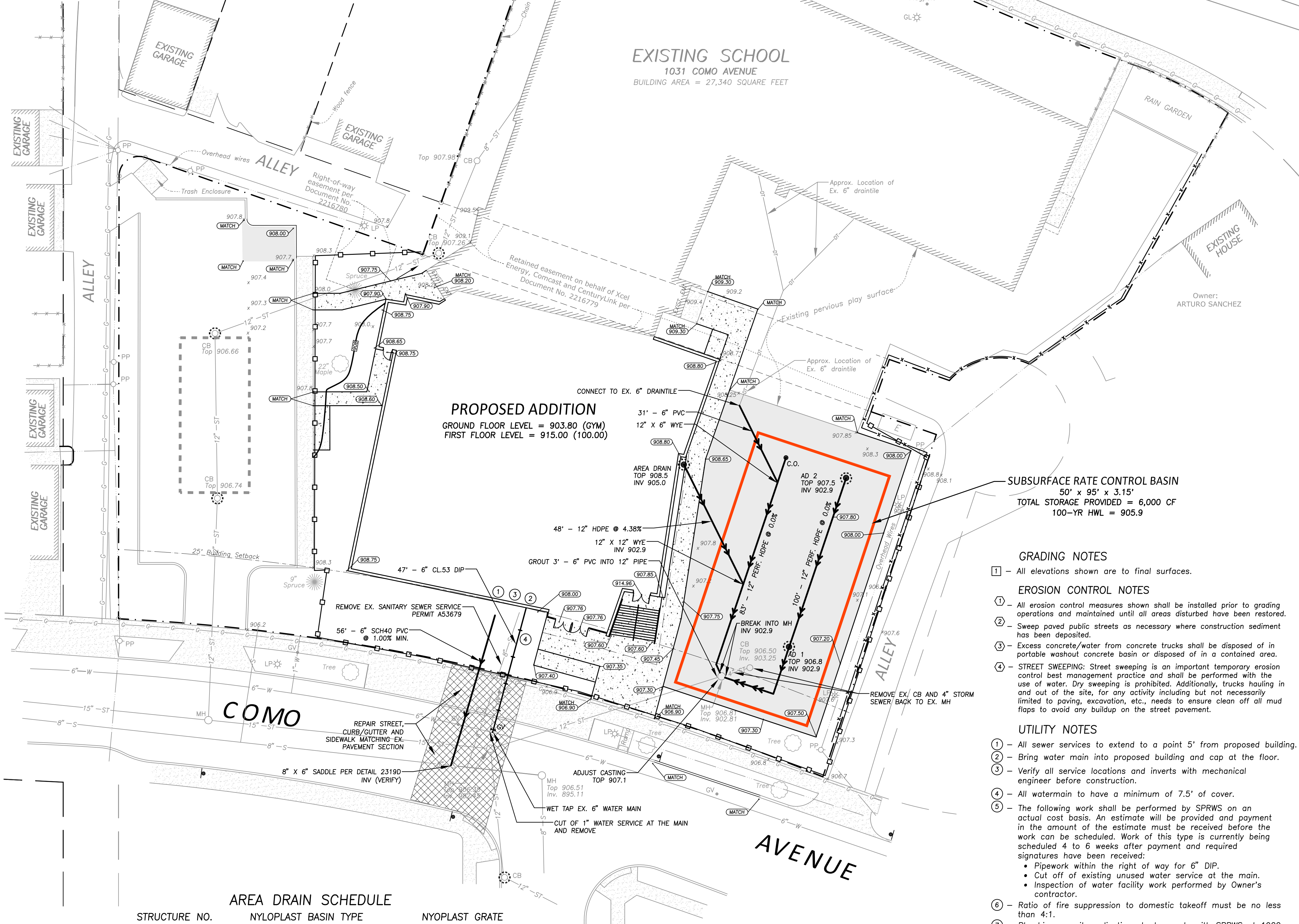
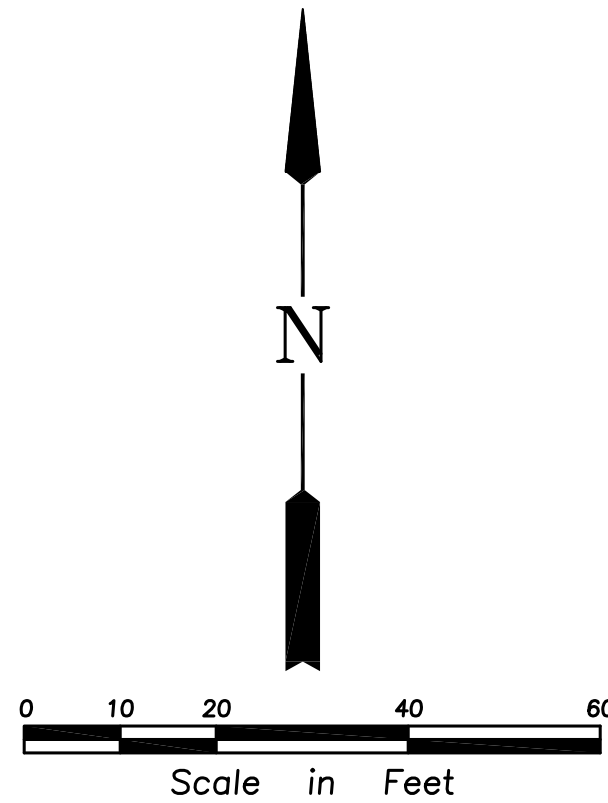
PARKING STALLS PROVIDED				
STANDARD STALLS	ACCESSIBLE STALLS	COMPACT STALLS	BICYCLE PARKING	TOTAL
17	2	9	9	37

- PEDESTRIAN CROSSWALK NOTES**
1. PAINTED AREAS TO BE CENTERED ON CENTERLINE AND LANE LINES.
 2. A MINIMUM OF 1.5 FT. CLEAR DISTANCE SHALL BE LEFT ADJACENT TO THE CURB FACE. IF LAST PAINTED AREA FALLS INTO THIS DISTANCE IT MUST BE OMITTED.
 3. AT SKEWED CROSSWALKS, THE BLOCKS ARE TO REMAIN PARALLEL TO THE LANE LINES AS SHOWN.
 4. THE BLOCKS SHALL BE PLACED SO THAT THEY ARE NOT LOCATED IN THE WHEEL PATH OF THE VEHICLES.

LEGEND	
	PROPOSED CONCRETE
	EXISTING WATERMAIN
	EXISTING SANITARY SEWER
	EXISTING STORM SEWER
	EXISTING BURIED GAS LINE
	EXISTING BURIED ELECTRIC LINE
	EXISTING BURIED COMMUNICATION LINE



PROPOSED AREA DRAIN
PROPOSED STORM SEWER
PROPOSED CONTOUR
PROPOSED ELEVATION
SILT FENCE
INLET PROTECTION DEVICE
PROPOSED STD. DUTY BITUMINOUS
PROPOSED CONCRETE
- EXISTING WATERMAIN
- EXISTING SANITARY SEWER
- EXISTING STORM SEWER
- EXISTING BURIED GAS LINE
- EXISTING BURIED ELECTRIC LINE
- EXISTING BURIED COMMUNICATION
EXISTING DRAIN TILE PIPE



AREA DRAIN SCHEDULE		
STRUCTURE NO.	NYLOPLAST BASIN TYPE	NYOPLAST GRATE
AD 1	18" DRAIN BASIN (2818AG5)	18" ROUND (1899CGP)
AD 2	18" INLINE DRAIN (2718AG12N)	18" ROUND (1899CGP)

- 1 - Construction supplies, materials, spoils, equipment, and vehicles shall not be stored or operated within the drip line of any public street tree or on turf boulevards without prior written approval from the City Forester. If the boulevard must be used for construction activities, all access routes, material storage or other related activities shall be protected by protective measures approved by the City Forester shall be taken to reduce soil compaction and protect tree(s) from damage.
- 2 - Care must be taken during construction and excavation to protect any survey monuments and/or property lines. Call Sam Gibson of Public Works Surveying (651-266-6075) if you have any questions.
- 3 - MISCELLANEOUS: Any infrastructure damage resulting from the contractors activities, incidental or otherwise, shall be repaired/replaced to the satisfaction of the City Engineer and the City.
- 4 - Contractor to maintain access to the fire department connection for fire department personnel at all times during the construction period.

5 - **INSPECTION CONTACT:** The developer shall contact the Right of Way inspector Dick Rohland at 651.485.1688 one week prior to beginning work to discuss traffic control, pedestrian safety, and coordination of all public work in the public right of way. Note: If a one week notice is not provided to the City, any resulting delays shall be the sole responsibility of the contractor.

At the start of the project, the contractor shall begin the process of obtaining the ROW in any way the developer shall provide to the ROW inspector the name and contact information of the Construction Project Manager or Construction Project Superintendent. If this information is not provided there may be a delay in obtaining permits for the work in the ROW. Said delays will be the sole responsibility of the developer.

- 6 - The contractor shall provide a continuous, accessible and safe pedestrian walkway that meets ADA and MN MUTCD standards if working in a sidewalk area, and traffic control per MN MUTCD requirements for work in the public right of way.
- 7 - Please be advised that a Temporary Pedestrian Access Route (TPAR) and/or a Temporary Traffic Control (TTC) plan may be required as part of the Right-of-Way (ROW) permitting process. Said TTC or TPAR plans must be approved by the City prior to the ROW Permitting office issuing a permit(s).

8 - The developer is strictly prohibited from installing private electrical wiring, conduit, receptacles and/or lighting in the City's Right of Way. This includes stubbing conduit or cable into the public Right of Way to accommodate utility feeds to the site. The developer must coordinate with each utility prior to construction to determine feed locations and properly install them. The developer is responsible for securing excavation of their service into the ground and where required) shall be installed by the City in accordance with Public Works Utility Review Committee. The Contractor shall contact Don Bjorkman, General Foreman, Lighting – Signal Maintenance, (651-266-9780), if removal or relocation of existing facilities is required or in the event of damage to the lighting or signal utilities. The Contractor shall assume responsibility (and related costs) for any damage or relocations. Access to signal facilities and lighting poles must be maintained at all times. The City's Traffic Operations Department will be notified and a sign sheet of access must be provided to the City at St. Paul's Traffic Operations Department to contact Don Bjorkman, General Foreman Signals and Lighting at 651-266-9780 for more information.

9 ORDERING OBSTRUCTION AND EXCAVATION PERMITS: Contact Public Works Right of Way Service Desk at (651) 266-6151. It is
10 strongly recommended that contractors call for cost estimates prior to bidding to obtain accurate cost estimates.

11 EXCAVATION PERMITS: All digging in the public right of way requires an Excavation Permit. If the proposed building is close
12 to the right of way, and excavating into the right of way is needed to facilitate construction, contact the utility inspector.

13 OBSTRUCTION PERMITS: The contractor must obtain an Obstruction Permit if construction (including silt fences) will block City
14 streets, sidewalks or alleys, or if driving over curbs.

15 FAILURE TO SECURE PERMITS: Failure to secure Obstruction Permits or Excavation Permits will result in a double-permit fee
16 and other fees required under City of St. Paul Legislative Codes.

- 13 - All utilities and contractors must be registered, insured and bonded, as recognized by the Public Works Right of Way Service Desk. (651-266-6151) if they will be working in the public road right of way.
- 14 - CONSTRUCTION IN RIGHT OF WAY: All work on curbs, driveways, and sidewalks within the public right of way must be done to City Standards and Specifications by a contractor licensed to work in the City right-of-way under a permit from Public Works Sidewalk Section (651-266-6108). Sidewalk grades must be carried across driveways.

- 15 – RIGHT OF WAY RESTORATION: Restoration of asphalt and concrete pavements are performed by the Public Works Street Maintenance Division. The contractor is responsible for payment to the City for the cost of these restorations. The contractor shall contact Public Works Street Maintenance to set up a work order prior to beginning any removals in the street at (651)-266-9700. Procedures and unit costs are found in Street Maintenance's "General Requirements – All Restorations" and are available at the permit office.
- 16 – The removal, pruning, and/or planting of trees on the public boulevard requires an approved permit from the City Forester (551-632-5129). Any work must be completed by a licensed tree contractor.
- 17 – Contractor shall contact City Forester, prior to demolition or other land disturbances associated with site construction, to verify tree protection is installed.
- 18 – Street trees shall be protected by establishing a tree protection zone using 4' tall fencing installed at the drip line of the tree. Tree protection fencing shall be installed prior to the start of any site work and maintained for the duration of the project. Proposed work within, or changes to the location of tree protection fencing shall be reviewed by the City Forester prior or alteration.
- 19 – ENCROACHMENTS: Per Chapter 134 of the Legislative Code, no person shall construct and maintain any projection or encroachment into the public right-of-way. Construction of the development that necessitates temporary use of the Right-of-Way (ROW) for construction purposes shall be limited to equipment, personnel, devices and appliances that are removable following construction. Encroachment permits will not be granted for devices such as tie racks, rock bolts, H-piles, lagging, timbers, sheet piling, etc. that the owner is seeking to abandon in the ROW. Section 3201.3 of the Minnesota Building Code defers final authority of encroachments into public right-of-way/public property to the local authority. City Legislative Code governs management of the public rights-of-way. Provided such installations are approved by Public Works, footings may be allowed to encroach into City ROW no more than twelve (12) inches at depths below eight (8) feet as provided for in Minnesota Building Code Section 3201.1. Said encroachments would require an encroachment permit from the City per Chapter 134 of the Legislative Code. Encroachments into County or State ROW are not allowed unless authorization has been granted from said agency. Encroachments installed in the ROW without authorization will be removed at no expense to the City/County/State.
- 20 – SIGNING: Signs regulating parking and/or traffic on private property shall be installed by the property owner or contractor outside of the public right-of-way (ROW). Removal of signs within the public ROW shall be completed by the City. New signs or the reinstallation of existing signs, as approved by Public Works Traffic Engineering, regulating parking and/or traffic in the public ROW for this development shall be installed by the City at the expense of the development. Contact Chris Gulden of Public Works 651-266-9778 two weeks in advance of needed sign work.
- 21 – Contractor is responsible for damage to the mainline sidewalk, curb, drive access and boulevard landscaping cause during the construction. Contractor advised to document pre-existing condition of the right of way prior to commencement of the construction.
- 22 – ROADWAY RESTORATION: As per the City's "Standard Specification for Street Openings" policy, restoration on roadway surfaces less than 5 years old will require full width mill and overlay or additional degradation fees. Degradation fees are determined by contacting the Right of Way Service Desk at (651)-266-6151. Pavement restoration shall be completed by the St. Paul Public Works Street Maintenance Division. All related costs are the responsibility of the developer/contractor. Contact Street Maintenance at (651)-266-9700 for estimate of costs for pavement restoration.

- 23 - Where driveways, sidewalks or other surface paving are removed, all concrete, asphalt and base materials shall be removed.
- 24 - Boulevard soils are to be protected during construction. Soil compaction due to construction activities shall be mitigated and soils loosened prior to final grading.
- 25 - All materials from rock construction entrances that cross turf boulevards shall be removed and soils restored, including the mitigation of soil compaction prior to final grading.
- 26 - Boulevards shall be restored with a minimum of 4" of topsoil.
- 27 - Concrete washouts shall not be located within the drip line of a tree.

28. All primary roof drains shall be connected to the storm sewer. MPC 4714.1101.1.
29. Secondary Roof Drainage shall drain to an approved place of disposal in the form Secondary Roof Drains installed per MPC 4714.1101 & 1102, and Minnesota State Building Code 1503.4. 1-5. Secondary roof drainage must discharge onto permeable soils and cannot drain onto the sidewalk. MPC 4714.1101.1. Both primary and secondary roof drainage systems must meet this requirement. Minnesota has specific requirements to address seasonal condition of freeze and thaw when the discharge from roof drains could create unsafe, icy conditions on sidewalk. A proper point of discharge that can be approved by the Authority Having Jurisdiction for secondary roof drainage is in the form of secondary roof drains piped internally, down to within 18 inches of grade, through the outside wall, onto a splash block installed per MPC 1101.5.3, and laid over permeable soils or an adequate amount where saturation of soil will not occur.
30. SEWER REPAIR PERMIT: Plumbing Contractor to obtain "Repair Permits" from Public Works for proposed modification to existing storm sewer connections. Call St. Paul PW permit desk (651-266-6234) for information on obtaining this permit.
31. SEWER REMOVAL/ABANDONMENT PERMIT for AS5679: Plumbing Contractor to obtain "Removal Permits" from Public Works to cut off existing sewer connections services to the property. Call St. Paul PW permit desk (651-266-6234) for information on obtaining this permit.
32. A four-sided trench box is required on all excavation deeper than 5 feet where underground work or inspection is to be performed. Ladders are required and must extend 3 feet above the surface of the trench. Sidewalks, pavements, ducts and appurtenant structures shall not be undermined unless a support system or another method of protection is provided. Trenches in excess of 20 feet in depth must be signed off by a registered professional engineer. Excavated material must be kept a minimum of 2 feet from the edge of the trench.
33. All water service valve boxes within construction area must be exposed and brought to grade upon completion of construction.
34. All pipe work inside of property to be performed by a plumber licensed by the State of Minnesota and Certified by the City of Saint Paul. SPRWS requires separate outside and inside plumbing permits for each new water service.
35. Water facility pipework within right of way to be installed by SPRWS. Excavation and restoration by owner's contractor.
36. The contractor providing excavation is responsible for obtaining all excavation and obstruction permits required by any governing authority.
36. All unused water connections must be cutoff at the main. This work will be done by SPRWS. Excavation and restoration is provided by the contractor. Contractor to mill and overlay the entire width of the road at the bluminson patch location. The contractor providing excavation is responsible for obtaining all excavation and obstruction permits required by any governing authority.

I hereby certify that this plan was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

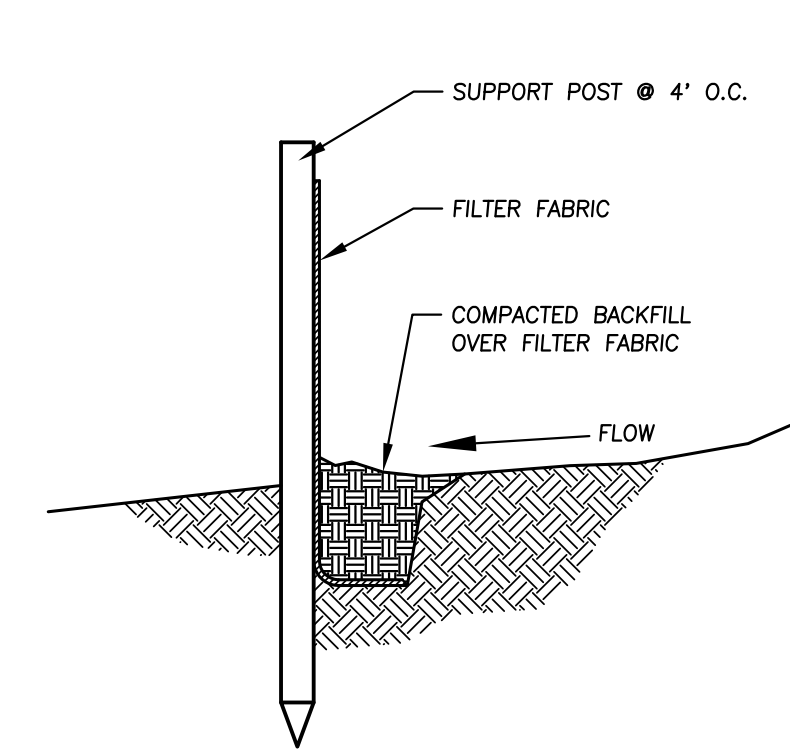
Buck D. Ford Date 5-21-19
 Name Benton G. Ford Reg. No. 24392

Issued		
CITY SITE PLAN REVIEW	10-23-18	
SPR RESUBMITAL	11-29-18	
ADDRESS CITY COMMENTS	2-14-19	
ADDRESS CITY COMMENTS	5-21-19	

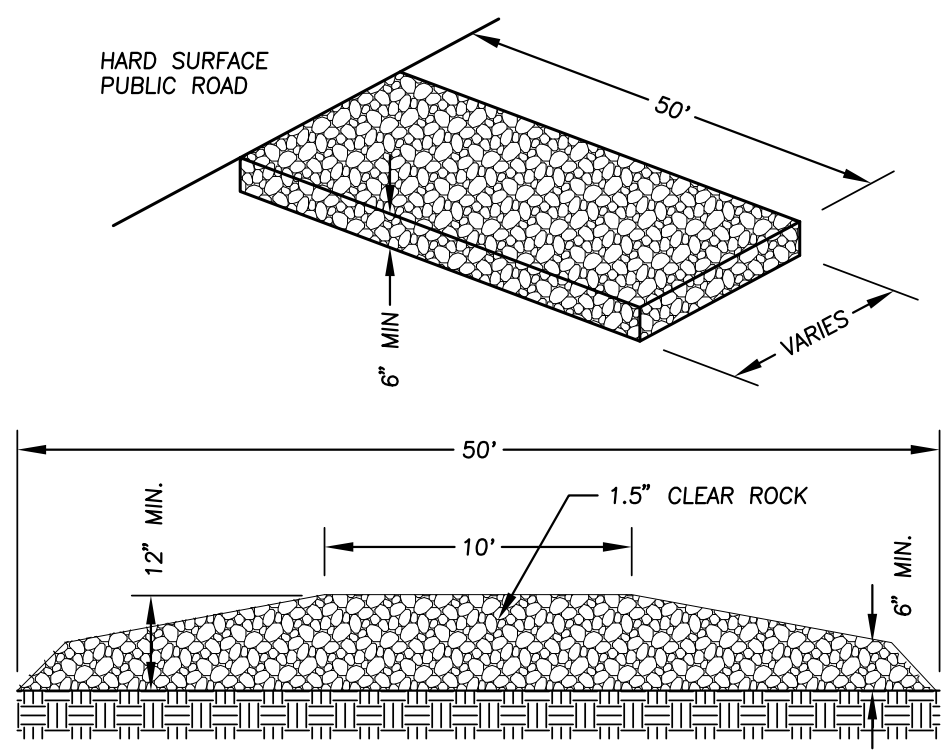
GRADING & EROSION CONTROL PLAN
TWIN CITIES GERMAN IMMERSION SCHOOL
IMMERSION SCHOOL
CITY OF ST. PAUL

SHEET NUMBER

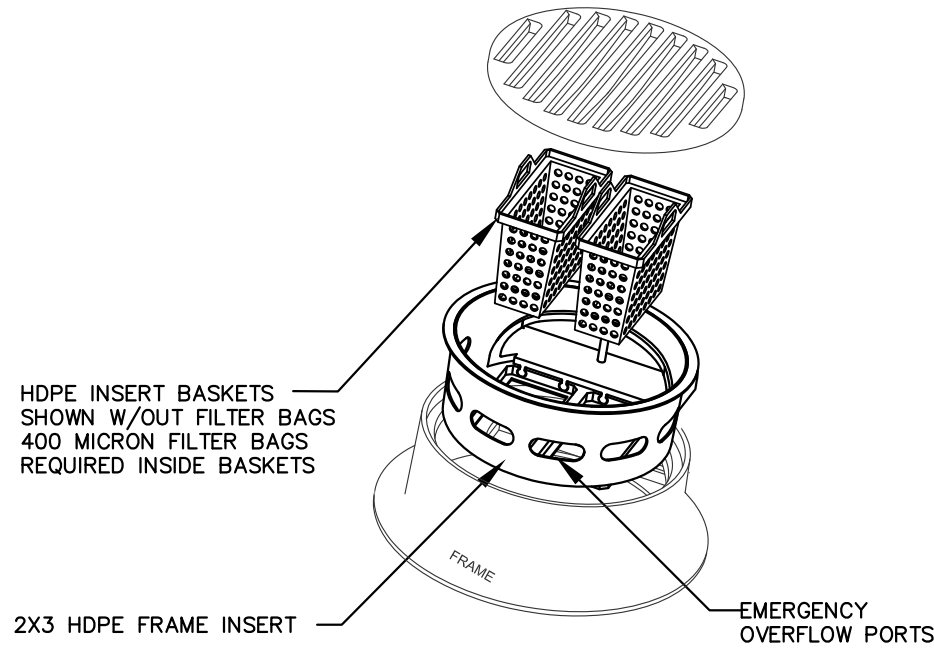
C2



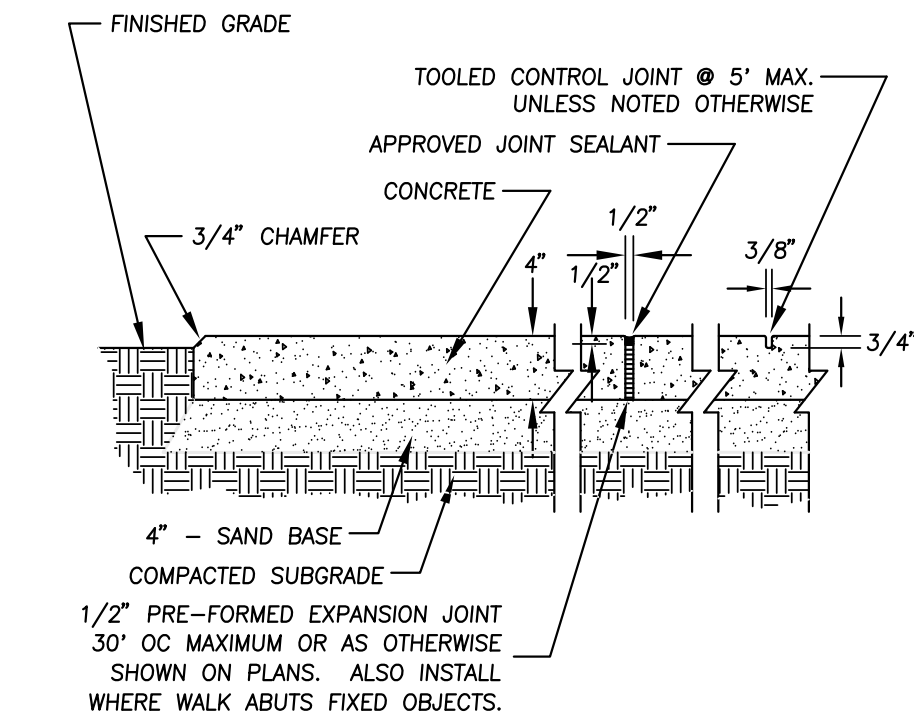
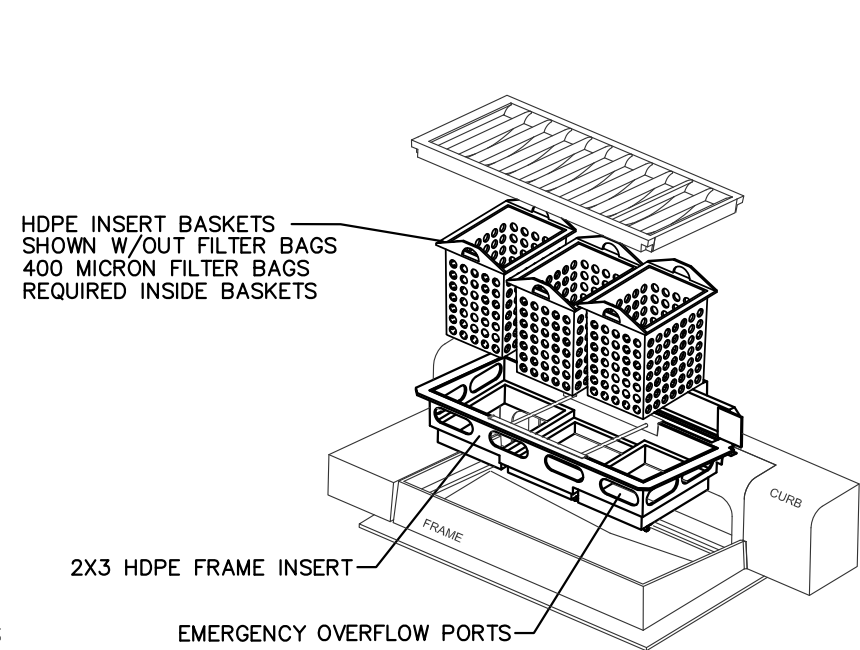
1
C3
SILT FENCE
NO SCALE



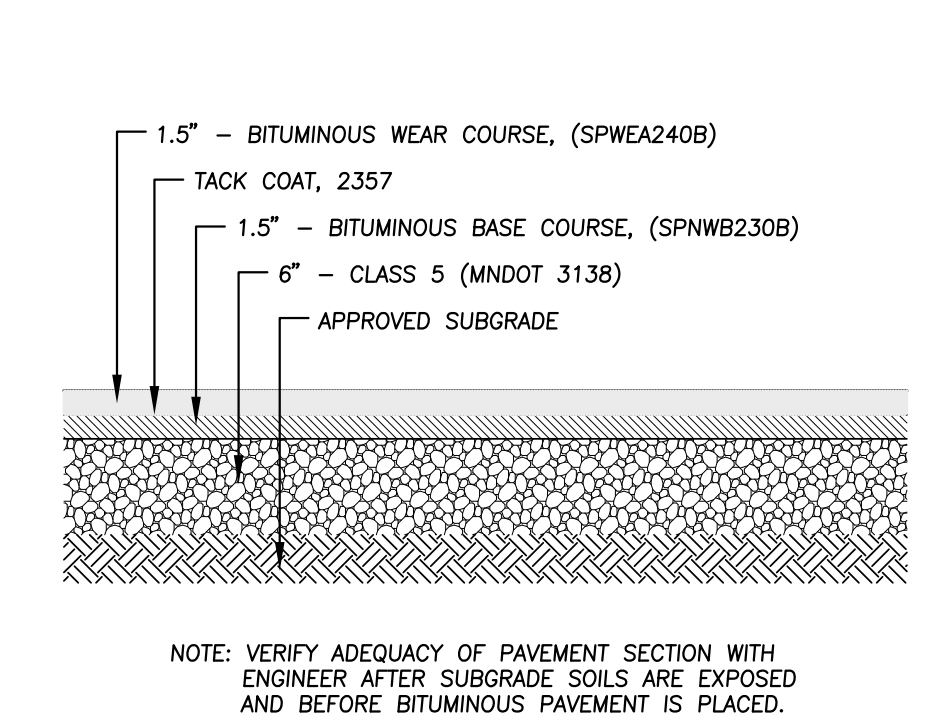
2
C3
ROCK CONSTRUCTION ENTRANCE
NO SCALE



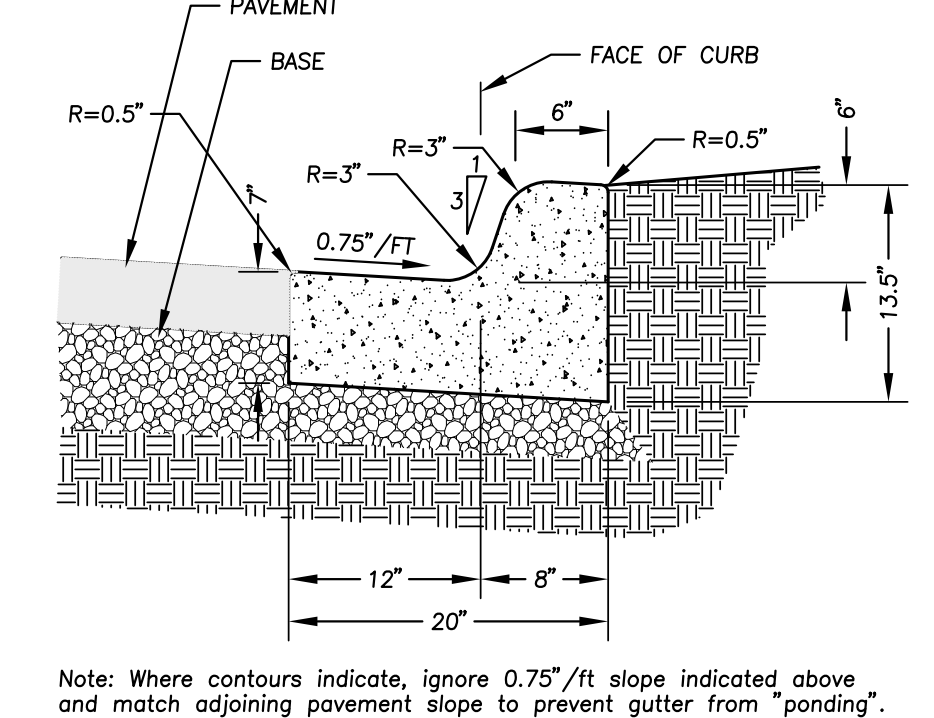
3
C3
INLET PROTECTION
(INFRA SAFE OR EQUAL)
NO SCALE



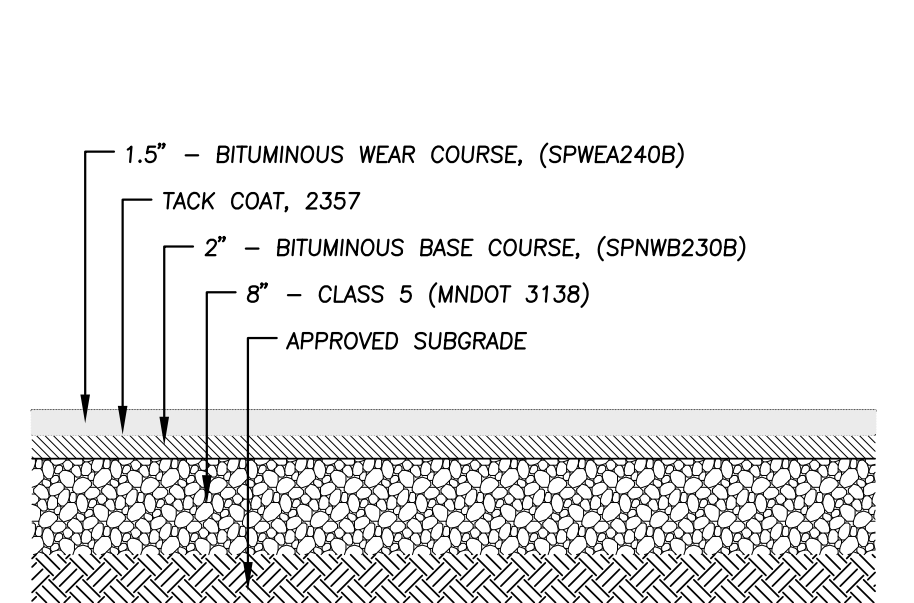
4
C3
CONCRETE SIDEWALK
NO SCALE



5
C3
PLAY AREA PAVEMENT SECTION
NO SCALE

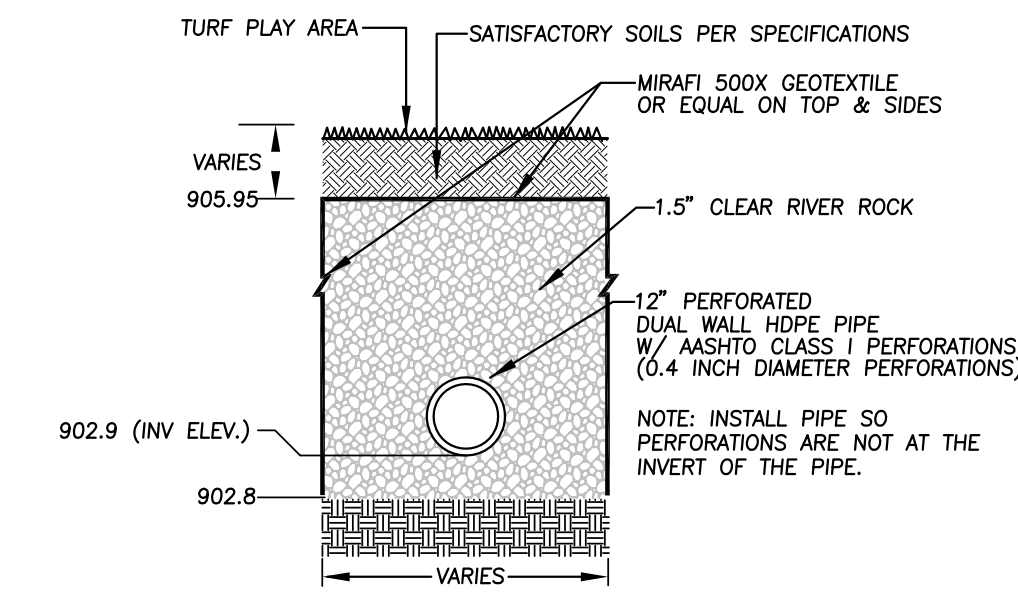


6
C3
B612 CONCRETE CURB & GUTTER
NO SCALE

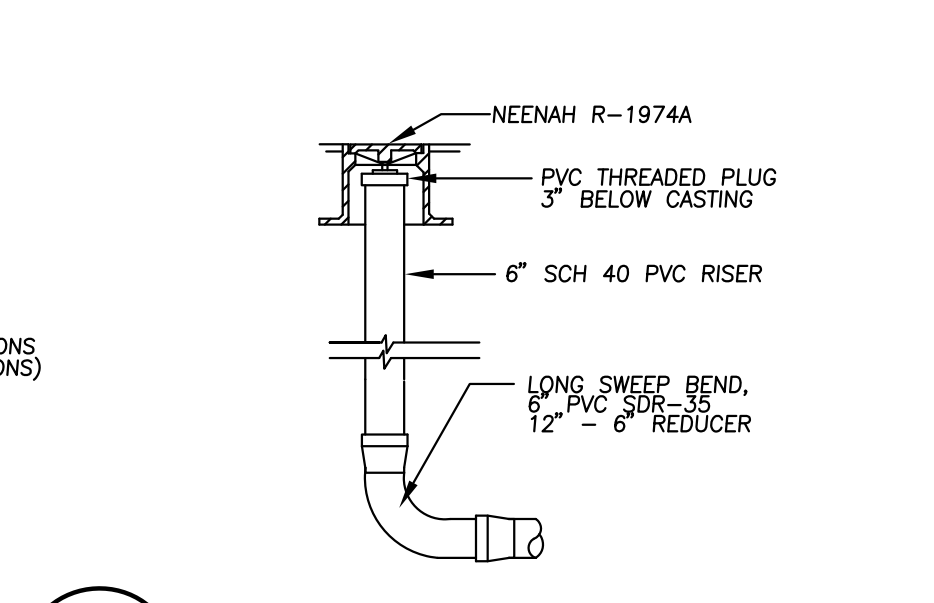


NOTE: PAVEMENT RECOMMENDATION PROVIDED BY NORTHERN TECHNOLOGIES, INC. NTI PROJECT NO. 13.60230.100

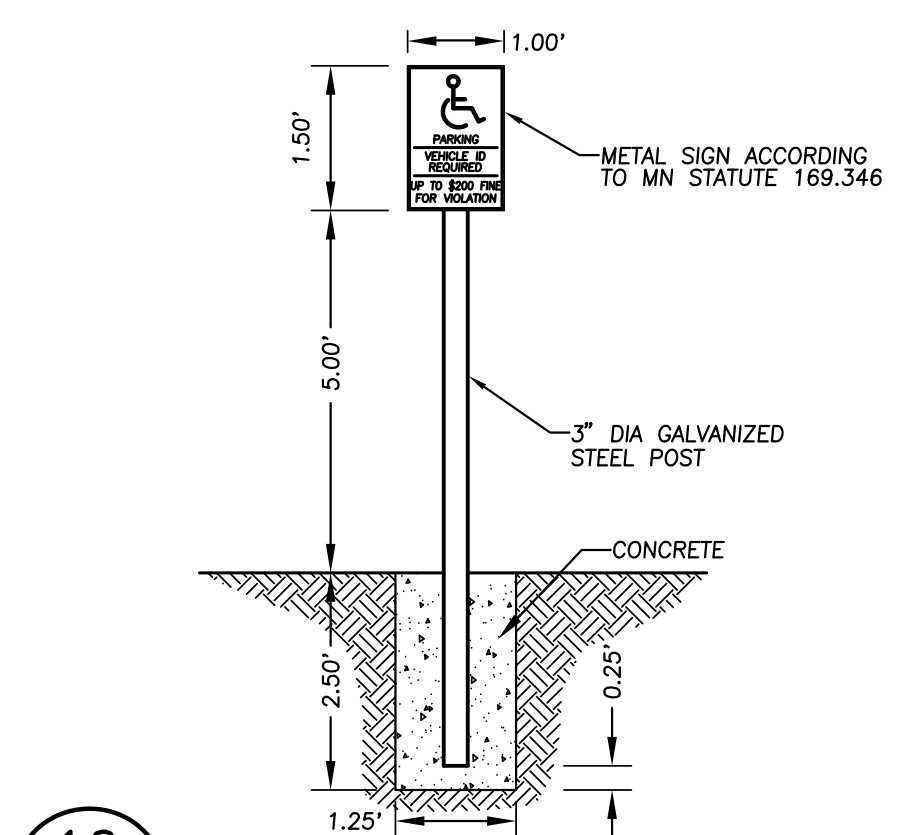
7
C3
PAVEMENT SECTION
NO SCALE



8
C3
SUBSURFACE RATE CONTROL BASIN
CROSS SECTION
NO SCALE



9
C3
STORM SEWER CLEANOUT
NO SCALE



10
C3
ACCESSIBLE PARKING SIGN AND POST
NO SCALE

SPECIFICATIONS

GENERAL

I. GENERAL

- Before construction begins, the Contractor will contact all utility companies, both public and private and have them locate all utilities within the construction limits.
- The Contractor shall be responsible for arranging all required inspections with the governing authority that has jurisdiction over the work that is to be performed.
- The Contractor shall stay within the construction limits unless approved otherwise by the Owner and/or Engineer. Construction limits are defined by the property boundary unless shown different on the plan.
- The Contractor shall be responsible for protecting all existing structures, utilities, trees, etc. from damage during construction.
- The Contractor shall be responsible for correcting any damage (at Contractor's expense).
- Any discrepancies found on the site that affect the proposed work shall be reported to the Owner and/or Engineer before the completion of any additional work.
- No soils report provided. Subgrade soils assumed adequate for the proposed construction.
- Existing Topography and Boundary Survey provided by Rehder & Associates, Inc.

SITE CLEARING

I. GENERAL

- Remove trees, shrubs, grass, and other vegetation or obstructions, as required, to permit installation of improvements shown on the Plans.

II. EXECUTION

- Trees and stumps shall be hauled from the site. Burial on-site or burning of trees and stumps will not be allowed.
- Where existing trees are indicated to remain, leave existing topsoil in place within drip lines to prevent damage to root system.
- Topsoil shall be stripped from disturbed areas and stockpiled in piles not exceeding 8-feet in depth.
- Under lawn or unpaved areas, compact the top 6 inches below subgrade and each layer of backfill or fill material at 95 percent maximum dry density.
- Remove all back dirt and unsuitable material from under drives and roadways within 3-feet of final pavement subgrade.
- Remove all waste materials and unsuitable or excess topsoil from Owner's property.

GRADING, EROSION CONTROL, AND TURF ESTABLISHMENT

I. GENERAL

- All grading, erosion control and turf establishment shall be according to the materials, workmanship, and other applicable requirements of the Minnesota Department of Transportation "Standard Specifications for Construction", latest edition, unless otherwise specified.
- All erosion control measures shown on the plans must be installed prior to commencement of grading operations and maintained until all areas altered on the site have been restored.
- All areas disturbed by construction shall be restored with seed and disked mulch, sod, wood fiber blanket, or be hard surfaced within two weeks of substantial completion of construction.
- Provide approved borrow soil materials from off-site when sufficient approved soil materials are not available from excavations. Remove all excess and unsatisfactory material from the site.
- Protect structures, utilities, sidewalks, pavements, and other facilities from damage caused by settlement, lateral movement, undermining, washout, and other hazards created by earthwork operations.
- Compaction shall not be less than the following percentages of maximum dry density according to ASTM D 698:
 - Under structures, building slabs, steps, and pavements, compact the top 12 inches below subgrade and each layer of backfill or fill material at 100 percent maximum dry density.
 - Under walkways, compact the top 6 inches below subgrade and each layer of backfill or fill material at 100 percent maximum dry density.
 - Under lawn or unpaved areas, compact the top 6 inches below subgrade and each layer of backfill or fill material at 95 percent maximum dry density.
- Grades as shown on the plan are to finished grade.
- Backfill trenches involving utilities under building slabs to be designed by Others (per their requirements).

II. PRODUCTS

- Satisfactory soils include ASTM D 2487 soil classification groups GW, GP, GM, SW, SP, and SM; free of rock or gravel larger than 2-inches in any dimension, debris waste, frozen materials, vegetation and other deleterious matter.
- Unsatisfactory soils include ASTM D 2487 soil classification groups GC, SC, ML, MH, CL, CH, OL, OH, and PT.
- All backfill and fill materials must be satisfactory soil materials.
- Topsoil shall be per ASTM D 5268, free of stones 1" or larger.
- Subbase and base material must be a naturally or artificially graded mixture of natural or crushed gravel, crushed stone, and natural or crushed sand meeting MNDOT Specifications for Class 5 gravel.
- Spring/Summer temporary turf establishment: seed shall be MNDOT Mixture 110 @ 100 lbs/acre and mulch shall be MNDOT Type 1.
- Winter temporary turf establishment: seed shall be MNDOT Mixture 100 @ 100 lbs/acre and mulch shall be MNDOT Type 1.
- Provide fresh, clean, strongly rooted sod not less than 2 years old with a uniform thickness of not less than 2 inches and free of weeds.

III. EXECUTION

- Fill under buildings shall be compacted to meet Soil Engineer's recommendations.
- Place 4-inches of topsoil over all areas to be re-established with turf.
- Provide erosion control measures to prevent erosion or displacement of soils and discharge of soil-bearing water runoff or airborne dust to adjacent properties and walkways.
- Place inlet protection devices in catch basins and maintain until all areas disturbed have been restored.
- Wherever construction vehicle access routes intersect paved public roads, provisions must be made to minimize the transport of sediment (mud) by runoff or vehicles tracking onto the paved road surface. Where sediment is transported onto a public road surface, the roads shall be cleaned thoroughly at the end of each day. Sediment shall be removed by shoveling or sweeping and be transported to a sediment controlled disposal area. Street washing shall be allowed only after sediment is removed in this manner.

BITUMINOUS PAVEMENT

I. GENERAL

- Provide hot-mix asphalt pavement according to the materials, workmanship, and other applicable requirements of the Minnesota Department of Transportation "Standard Specifications for Construction", latest edition, unless otherwise specified.
- Conform to applicable standards of authorities having jurisdiction for asphalt paving work on public property.

II. PRODUCTS

- Use coarse and fine aggregate materials and gradations that have performed satisfactorily in previous installations.
- Provide a base and wear course as indicated on the plan unless otherwise specified.
- Provide a tack coat as indicated on the plan unless otherwise specified.

III. EXECUTION

- Verify that the subgrade is dry and in suitable condition to support paving and imposed loads.
- The Contractor shall furnish a tandem truck loaded with a minimum of 14-tons to check the completed subgrade and/or aggregate base for soft spots prior to placement.
- Machine place hot-mix asphalt on prepared surface, spread uniformly, and strike off. Place asphalt mix by hand to areas inaccessible to equipment in a manner that prevents segregation of mix. Place each course to required grade, cross section, and thickness, when compacted.
- Begin compaction as soon as placed hot-mix paving will bear roller weight without excessive displacement.
- Provide an average density of 96 percent of reference laboratory density according to ASTM D 1559, but not less than 94 percent nor greater than 100 percent.
- Tolerances: Base course thickness shall be plus or minus 0.5-inches and surface course shall be plus or minus 0.25-inches.

PORTLAND CEMENT CONCRETE PAVEMENT

I. GENERAL

- Provide Portland cement concrete pavement for roads, curbs, walks and exterior slabs according to the materials, workmanship, and other applicable requirements of the Minnesota Department of Transportation "Standard Specifications for Construction", latest edition, unless otherwise specified.

II. PRODUCTS

- Portland cement concrete for curb and gutter and sidewalk shall be 4000 psi, 28-day compressive strength, 5.0% air entrainment, and 3-inch slump.
- Curing compound shall be solvent-borne, liquid membrane-forming ASTM C309, Type I or approved equal.

III. EXECUTION

- The Contractor shall furnish a tandem truck loaded with a minimum of 14-tons to check the completed subgrade and/or aggregate base for soft spots prior to pavement placement.
- Comply with requirements and with 304R for measuring, mixing, transporting, and placing concrete.
- Preformed expansion joints shall be placed at each end of curb radius, at intersections, and approximately every 200-feet.
- Contraction joints shall be placed at minimum 10-foot intervals in the curb and gutter and at 5-foot for walks.
- Provide a medium to fine broom finish perpendicular to traffic flow.
- Protect freshly placed concrete from premature drying and excessive cold or hot temperatures using moisture curing, moisture-retaining-cover curing, curing compound or a combination of these.

STORM SEWER

I. GENERAL

- Storm sewer shall comply with all local regulations pertaining to storm sewer systems including materials, installation, and testing. If no regulations exist, comply with "Standard Utilities Specifications" by the City Engineers Association of Minnesota, latest edition.

II. PRODUCTS

- Storm sewer pipe indicated on the plan as PVC shall be polyvinyl chloride pipe, ASTM D 3034, SDR 35, for solvent-cemented or gasket joints.
- Storm sewer indicated on the plan as HDPE shall be dual wall corrugated polyethylene pipe with soil tight fittings per the Corrugated Polyethylene Pipe Association (CPPA) standard specification 100-97.

III. EXECUTION

- The plans indicate the general location and arrangement of underground storm sewer systems. Location and arrangement of piping take into account many design considerations. Install piping as indicated on the plans, to the extent practical.
- Contractor should verify locations of utility connections at the building the architectural and mechanical plans.
- PVC and HDPE sewer pipe shall be bedded in accordance with ASTM F 2306, "Standard Specification for 12 to 60 in. Annular Corrugated Profile-Wall Polyethylene (PE) Pipe and Fittings for Gravity-Flow Storm Sewer and Subsurface Drainage Applications".
- Storm sewer services shall be extended to within 5-feet of the building. Plug ends and mark by installing a 2" x 2" wood board from the plugged end to 4-feet out of the ground.

SANITARY SEWER

I. GENERAL

- Sanitary sewer shall comply with all local regulations pertaining to sanitary sewer systems including materials, installation, and testing. If no regulations exist, comply with "Standard Utilities Specifications" by the City Engineers Association of Minnesota, latest edition.

II. PRODUCTS

- Sanitary sewer pipe indicated on the plan as PVC shall be polyvinyl chloride pipe, ASTM D 3034, SDR 35, for solvent-cemented or gasket joints.

III. EXECUTION

- The plans indicate the general location and arrangement of underground sanitary sewer systems. Location and arrangement of piping take into account many design considerations. Install piping as indicated on the plans, to the extent practical.
- Contractor should verify locations of utility connections at the building the architectural and mechanical plans.
- PVC sewer pipe shall be bedded in accordance with ASTM D 2321, "Recommended Practice for Underground Installation of Flexible Thermoplastic Sewer Pipes".
- Sanitary sewer services shall be extended to within 5-feet of the building. Plug ends and mark by installing a 2" x 2" wood board from the plugged end to 4 feet out of the ground.

WATER MAIN

I. GENERAL

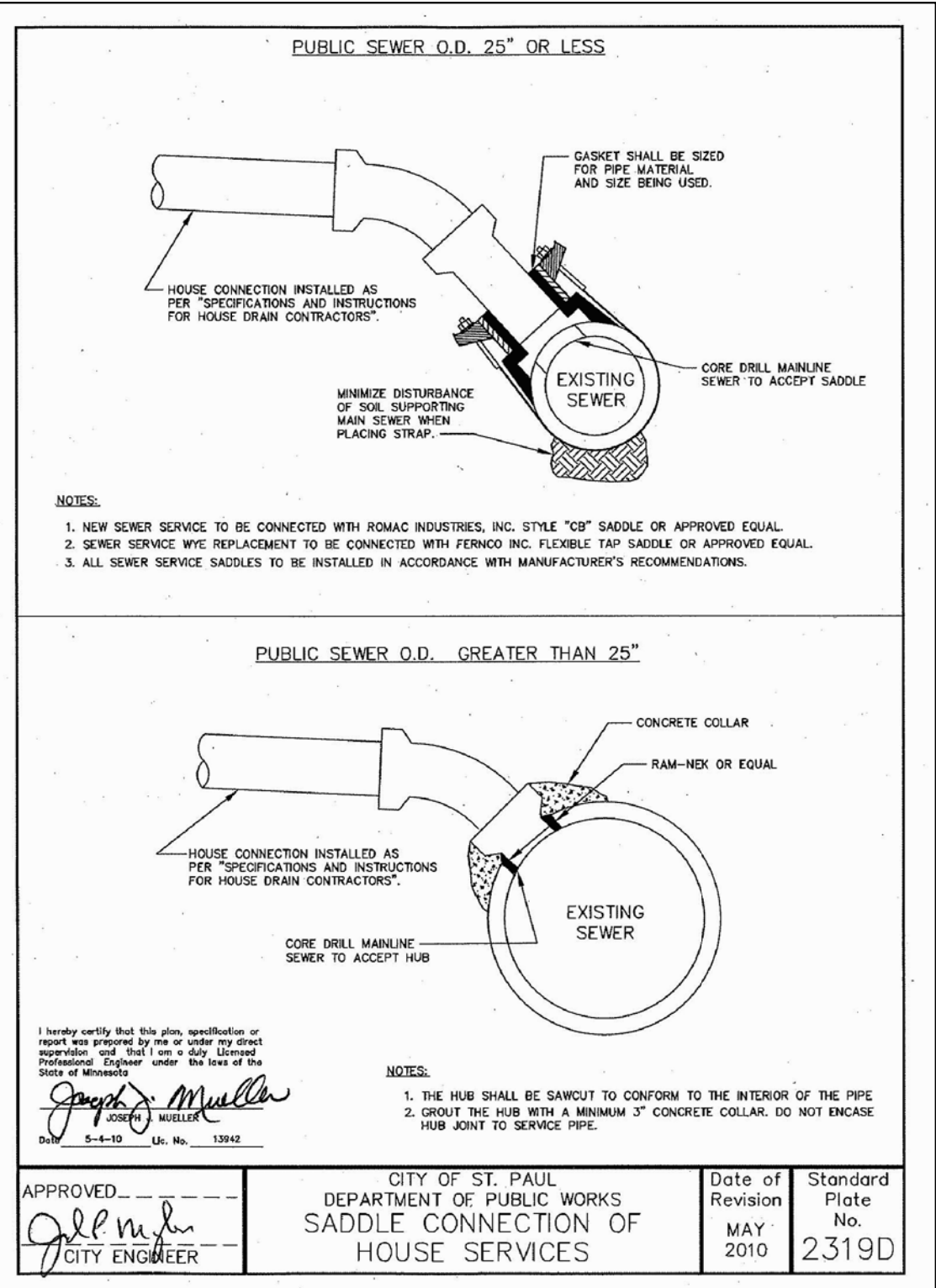
- Water main shall comply with all local regulations pertaining to water main systems including materials, installation, and testing. If no local regulations exist, comply with "Standard Utilities Specifications" by the City Engineers Association of Minnesota, latest edition.

II. PRODUCTS

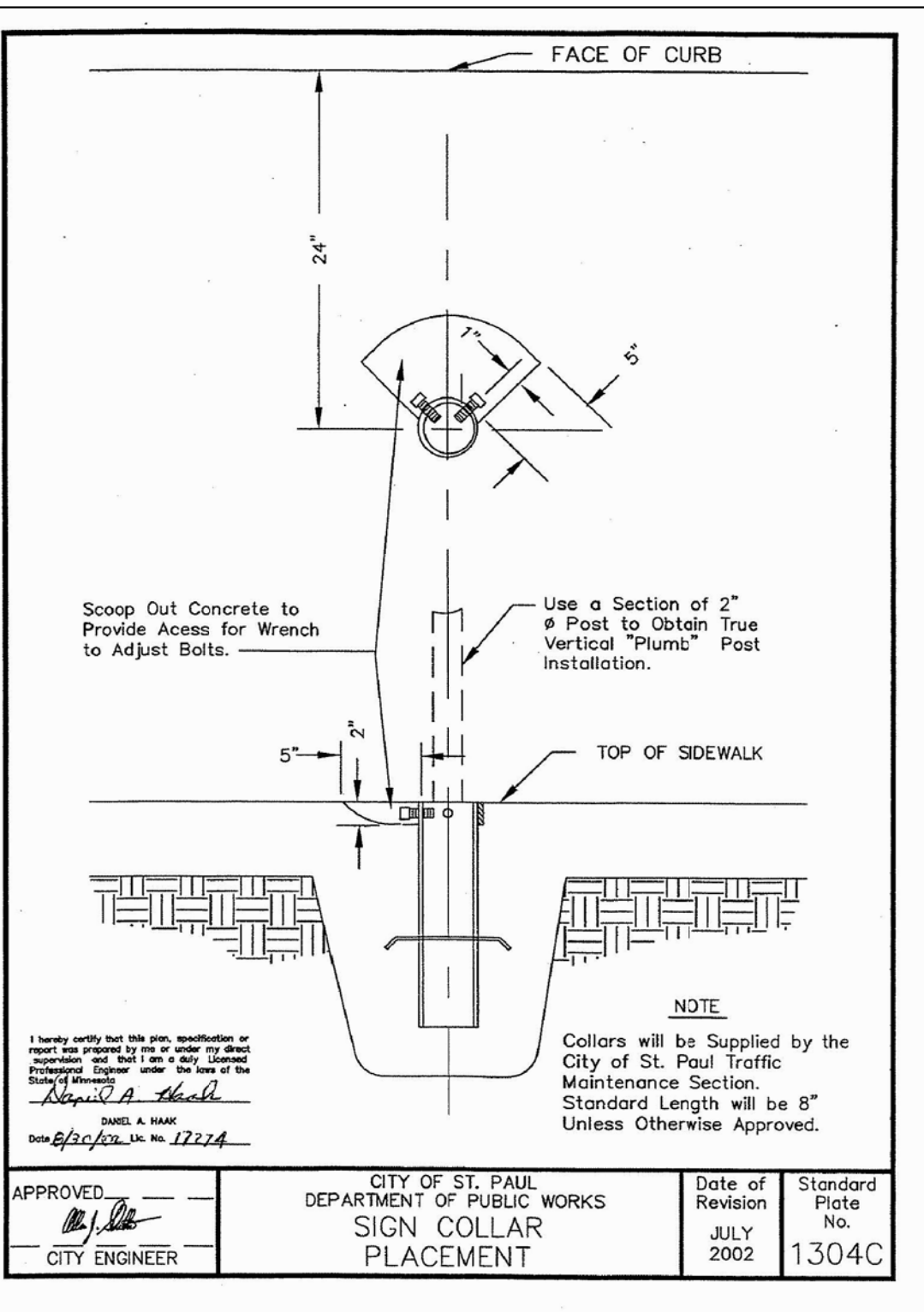
- Water main, indicated on the plan as DIP, shall be ductile iron pipe, Class 53, with push on joints and shall provide electrical conductivity across each joint.

III. EXECUTION

- The plans indicate the general location and arrangement of underground water main systems. Indicated locations and arrangements were used to size pipe and calculate friction loss, expansion, pump sizing, and other design considerations. Install piping as indicated, to the extent practical.
- Bury all water main with a depth of cover of at least 7.5-feet or with the top at least 12-inches below frost penetration, whichever ever is greater.
- All bends, stubs, and hydrants shall be rodded to the water main using 0.75-inch tie rods.
- Top water main with size and in location as indicated according to the requirements of the local water utility. The Contractor shall pay water utility fee.
- Test all installed piping as required by the local water utility.



11
C3
PUBLIC SEWER O.D. 25" OR LESS
NO SCALE



12
C3
PUBLIC SEWER O.D. GREATER THAN 25"
NO SCALE

Issued

CITY SITE PLAN REVIEW	10-23-18
SPR RESUMMITAL	11-29-18
ADDRESS CITY COMMENTS	2-14-19
ADDRESS CITY COMMENTS	5-21-19

DETAILS & SPECIFICATIONS
TWIN CITIES GERMAN IMMERSION SCHOOL
IMMERSION SCHOOL
CITY OF ST. PAUL

SHEET NUMBER

C3

I hereby certify that this plan was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.
[Signature]
Name: Benton G. Ford Date: 5-21-19 Reg. No.: 24392

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PROJECT NO.: 161-3062.011 DRAWING FILE: 3062011.DWG