summit credit union

Summit Credit Union
2208 E. Moreland Blvd Branch Office
Waukesha, WI

Plan Commission

STRANG

To: City of Waukesha Planning Department and Plan Commission

Project: Summit Credit Union Branch Office
2208 E. Moreland Blvd
Waukesha, Wisconsin

Applicants' Contact: Summit Credit Union
4800 American Parkway
Madison Wisconsin 53718
Attn: Jeremy Eppler
608-243-5000, extension 4407

Architect: Strang, Inc.
6411 Mineral Point Road
Madison, WI 53705
Attn: Peter Tan and Austen Conrad
608-276-9200

Civil Engineer: JSD Professional Services
161 Horizon Drive, Suite 101
Verona, Wisconsin 53593
Attn: Bill Dunlop
608-848-5060

Landscape Architect: JSD Professional Services
161 Horizon Drive, Suite 101
Verona, Wisconsin 53593
Attn: Bill Dunlop
608-848-5060

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Request

Applicant is seeking Plan Commission approval on the use of the property in general as well as the building brand & design prior to moving forward with permitting.

Zoning Data

Current Zoning: B-5 Community Business District

Proposed Use: Single story financial institution with drive-through teller facilities.

Project Statistics

Legal: Refer to site survey attached.

Lot Area: 49,364 sq. ft.

Lot Coverage: Impervious = 28,476 sq. ft. (57.69% of site)

- 3,687 sq. ft. building "footprint"
- 22,562 sq. ft. parking and drive aisles
- 2,227 sq. ft. sidewalk and misc. paving.

Pervious area = 20,888 sq. ft. (42.31% of site)

- Lawn, landscaped areas, drainage ways

Building Area: Building: 3,687 gross square feet (GSF)
Drive Thru Canopy: 649 GSF
Total "footprint": 4,336 GSF

Building height: 1 story
23'-11" feet to top of highest coping

Parking

Employees = 8 max, 5 normal	8 stalls required.
Customer Floor Area = 1,704 sf	1,704 sf / 1 stall per 150 sf = 12 stalls required

20 parking stalls required. 21 parking stalls provided on site (including 1 handicapped accessible stall)

Bicycle Parking

Credit Union = 3,687 gross sq. ft.	3,687 sf / 1 stall per 2000 sf = 2 stalls required
Employees = 8 max, 5 normal	8 employees / 1 stall per 20 employees = 1 stall required

3 bicycle parking stalls required. 4 bicycle stalls provided on site.

Description of Intended Use

Financial Institution:

Operational characteristics will be those of a typical financial institution. Two drive-through teller aisles and one drive-through ATM aisle will serve credit union members from their autos. The building will have a walk-in lobby for credit union members who wish to conduct business with a teller or financial adviser, and for people wishing to become members of the credit union. The "back of house" area will contain storage, a staff break room, and other support spaces.

For walk-in customers, the lobby will be open from approximately 9:00 am until 5:00 pm Monday through Thursday, 9:00am – 6:00pm Friday, and 9:00 am to noon on Saturday.

The drive-through teller lanes will be open from approximately 8:00 am to 6:00 pm Monday through Friday and from 8:30 am to 1:00pm on Saturday. An ATM machine on the outer-most drive-through lane will be available at all times.

Daily Traffic Expected: 100 walk-in customers, 200 drive-through customers

Design Narrative

The site and building is designed in response to Summit Credit Union's desire for a highly visible facility that reaches out to the community, while being responsive to the integrity of its contextual fabric. The massing and design composition of the building is such that it presents a pleasing face to the public realm on all four sides of the site. The drive-up canopy design is fully integrated into the overall design composition of the facility.

Floor-to-ceiling windows allow for much of the building to rely on natural daylighting. To underscore Summit's commitment to sustainability, large southwest facing vertical sail-shaped fabric sunshades reduce solar heat gain and glare on the southwest facing curtainwall of the branch and provide cool, diffuse daylighting to the interior. Please refer to the attached photographs of the Summit Credit Union Monona branch for an idea of the design forms and details, as well as the exterior materials and finishes on the project.

As a member-owned cooperative, Summit Credit Union believes they have an obligation to do what is best for its members, and collectively be good citizens of the community. The design and architecture of the Summit Credit Union Moreland Blvd Branch clearly represents the credit union's mission and vision into the future.

Exterior Materials and Colors:

Brick: Brick comprises more than 50% of the non-window exterior surface of the building. The brick proposed is Endicott Manganese Ironspot brick.

Exterior Walls Above Window Heads: Silver metallic ribbed metal panel.

Windows: Aluminum storefront system in a clear anodized aluminum finish.

Copings, window sills, rooftop mechanical equipment screen and accent trim on roof overhang fascias: Silver metallic metal to match finish of window frames.

Figure 1. Typical materials.

Figure 2. Summit Credit Union in Monona, WI. Proposed building will have a similar design language and material palette.

Figure 3. Summit Credit Union in Monona, WI. Proposed building will have a similar design language and material palette.

CITY OF WAUKESHA
PLAN COMMISSION

Application for Review

Date Submitted

Name of Project: Summit Credit Union - Moreland Blvd Branch Office

Address (If no address, location): 2208 E. Moreland Blvd

Applicant information:

Name: Jeremy Eppler
Company Name: Summit Credit Union
Address: 4800 American Parkway
Madison, WI 53718
Phone: 608/243-5000, EXT 4407

Owner information:

Name: Mr. James Rosen
Company Name: Pinnacle Waukesha Burgers, LLC
Address: 19035 W. Capitol Drive, Suite 108
Brookfield, WI 53045
Phone: 414/708-1200

IMPORTANT: A DIGITAL copy must be submitted with this application (JPG and/or PDF) along with 4 full-size (one of which must be in COLOR) and 7 reduced copies unless waived by the department. The reduced set of copies should only include the project location map showing a ½ mile radius, a COLORED landscape plan, COLORED building elevations, and exterior light fixture cut sheets.

	TYPE OF REVIEW	FEE
☐	Rezoning: Attach COPY of rezoning petition along with fee. Original must be submitted to City Clerk.	$350
☐	Certified Survey Map	$150 + $50/lot
☐	Plat Review - *Plat Reviews* are held until next meeting. 9 copies must be submitted. You must also submit 4 to the County and 2 to State. (Check appropriate box)	☐ prelim.: $500 + $10/lot ☐ final: $300 + $10/lot
☒	** Site Plan & Arch. Review - Architectural changes do not need preliminary review. (Check appropriate box)	☐ prelim.: $300 + $15/1000 sq.ft. or res. unit ☒ final: $200 + $10/1000 sq.ft. or res. unit
☐	** Conditional Use with Site Plan (Check appropriate box)	☐ prelim.: $300 + $15/1000 sq.ft. or res. unit ☐ final: $200 + $10/1000 sq.ft. or res. unit
☐	Conditional Use (No Site Plan)	$200
☐	** Airport Hangar Review	$300
☐	Home Industry (Attach info sheet.)	$100
☐	House Move	$150
☐	Street Vacation	$150
☐	Other (specify): _____	$100
☐	** PUD Review	$400 added to S.P.A.R. fee
☐	PUD Amendment	$100
☐	Annexations and/or Attachments - Original must be submitted to City Clerk.	No Fee
☐	Resubmittal	$150

** Please attach to this form a Review Checklist if it involves an architectural and/or site plan review.

DEADLINE FOR THE SUBMITTAL IS THE MONDAY FOUR WEEKS BEFORE THE MEETING BY 4:00 P.M.

INTERNAL USE ONLY

Amount Due: _____ Check #: _____ Amount Paid: _____ Rec'd By: _____

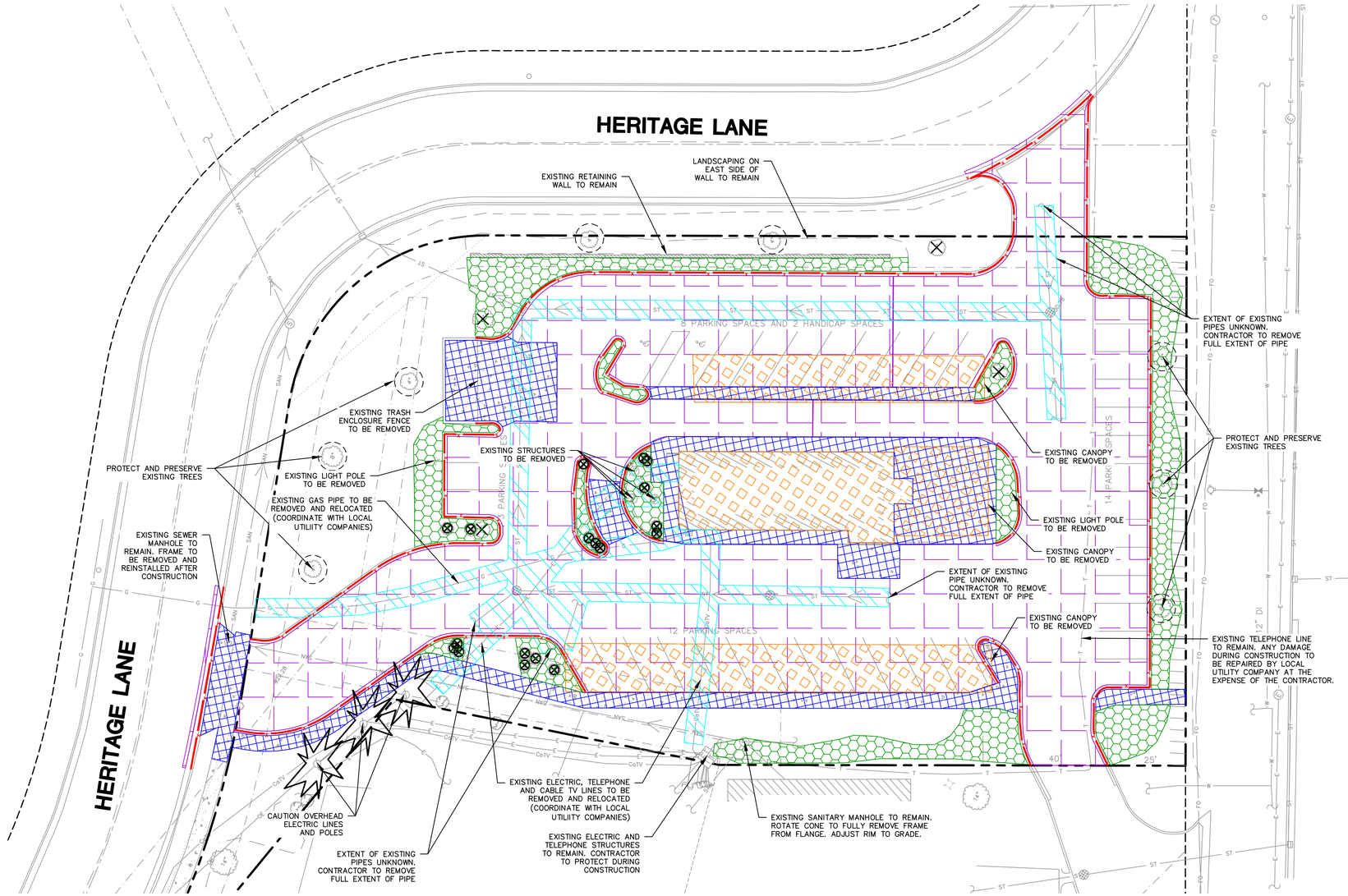
Rev. 03/2015

GENERAL NOTES

1. REFER TO THE EXISTING CONDITIONS SURVEY FOR EXISTING CONDITIONS NOTES AND LEGENDS.
2. ALL WORK IN THE ROW SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR SEWER & WATER CONSTRUCTION IN WISCONSIN, LATEST EDITION AND CITY OF WAUKESHA REQUIREMENTS.
3. NO SITE GRADING OUTSIDE OR DOWNSLOPE OF PROPOSED SILT FENCE LOCATION. NO LAND DISTURBANCE BEYOND PROPERTY LINES UNLESS OTHERWISE SHOWN.
4. THIS PROJECT HAS BEEN DESIGNED AND WILL BE CONSTRUCTED IN COMPLIANCE WITH ALL OF THE WDNR WRAPP PERMIT APPLICATION STANDARDS.
5. JSD SHALL BE HELD HARMLESS AND DOES NOT WARRANT ANY DEVIATIONS BY THE OWNER/CONTRACTOR FROM THE APPROVED CONSTRUCTION PLANS THAT MAY RESULT IN DISCIPLINARY ACTIONS BY ANY OR ALL REGULATORY AGENCIES.

DEMOLITION NOTES

1. THIS PLAN INDICATES ITEMS ON THE PROPERTY INTENDED FOR DEMOLITION BASED ON THE CURRENT SITE DESIGN THAT HAVE BEEN IDENTIFIED BY A REASONABLE OBSERVATION OF THE EXISTING CONDITIONS THROUGH FIELD SURVEY RECONNAISSANCE, "DIGGER'S HOTLINE" LOCATION, AND GENERAL "STANDARD OF CARE". THERE MAY BE ADDITIONAL ITEMS THAT CAN NOT BE IDENTIFIED BY A REASONABLE ABOVE GROUND OBSERVATION, OF WHICH THE ENGINEER WOULD HAVE NO KNOWLEDGE OR MAY BE A PART OF ANOTHER DESIGN DISCIPLINE. IT IS THE CONTRACTOR'S/BIDDER'S RESPONSIBILITY TO REVIEW THE PLANS, INSPECT THE SITE AND PROVIDE HIS OWN DUE DILIGENCE TO INCLUDE IN HIS BID WHAT ADDITIONAL ITEMS, IN HIS OPINION, MAY BE NECESSARY FOR DEMOLITION. ANY ADDITIONAL ITEMS IDENTIFIED BY THE CONTRACTOR/BIDDER SHALL BE IDENTIFIED IN THE BID AND REPORTED TO THE ENGINEER OF RECORD. JSD TAKES NO RESPONSIBILITY FOR ITEMS ON THE PROPERTY THAT COULD NOT BE LOCATED BY A REASONABLE OBSERVATION OF THE PROPERTY OR OF WHICH THEY WOULD HAVE NO KNOWLEDGE.
2. CONTRACTOR SHALL KEEP ALL STREETS AND PRIVATE DRIVES FREE AND CLEAR OF ALL CONSTRUCTION RELATED DIRT, DUST AND DEBRIS.
3. ALL TREES WITHIN THE CONSTRUCTION LIMITS SHALL BE REMOVED UNLESS SPECIFICALLY CALLED OUT FOR PROTECTION. ALL TREES TO BE REMOVED SHALL BE REMOVED IN THEIR ENTIRETY AND STUMPS SHALL BE GROUND TO PROPOSED SUBGRADE.
4. ALL LIGHT POLES TO BE REMOVED SHALL BE REMOVED IN THEIR ENTIRETY, INCLUDING BASE AND ALL APPURTENANCES. SALVAGE FOR RELOCATION. COORDINATE RELOCATION AND/OR ABANDONMENT OF ALL ELECTRIC LINES WITH ELECTRICAL ENGINEER AND OWNER PRIOR TO DEMOLITION.
5. ABANDONED/REMOVED ITEMS SHALL BE DISPOSED OF OFF SITE UNLESS OTHERWISE NOTED.
6. CONTRACTOR TO REPLACE ALL SIDEWALK AND CURB AND GUTTER ABUTTING THE PROPERTIES, WHICH IS DAMAGED BY THE CONSTRUCTION, OR ANY SIDEWALK AND CURB AND GUTTER THAT THE CITY ENGINEER DETERMINES NEEDS TO BE REPLACED BECAUSE IT IS NOT AT A DESIRABLE GRADE REGARDLESS OF WHETHER THE CONDITION EXISTED PRIOR TO BEGINNING CONSTRUCTION.
7. PRIOR TO CONSTRUCTION, THE CONTRACTOR IS RESPONSIBLE FOR:
   - 7.1. EXAMINE ALL SITE CONDITIONS RELATIVE TO THE CONDITIONS INDICATED ON THE ENGINEERING DRAWINGS. ANY DISCREPANCIES ARE TO BE REPORTED IMMEDIATELY TO THE ENGINEER AND RESOLVED PRIOR TO THE START OF CONSTRUCTION.
   - 7.2. VERIFYING UTILITY ELEVATIONS AND NOTIFYING ENGINEER OF ANY DISCREPANCIES. NO WORK SHALL BE PERFORMED UNTIL THE DISCREPANCIES ARE RESOLVED.
   - 7.3. NOTIFYING ALL UTILITIES PRIOR TO THE REMOVAL OF ANY UNDERGROUND UTILITIES.
   - 7.4. NOTIFYING THE DESIGN ENGINEER AND LOCAL CONTROLLING MUNICIPALITY 48 HOURS PRIOR TO THE START OF CONSTRUCTION TO ARRANGE FOR APPROPRIATE CONSTRUCTION INSPECTION.
8. ANY SANITARY SEWER, SANITARY SEWER SERVICES, WATER MAIN, WATER SERVICES, STORM SEWER, OR OTHER UTILITIES, WHICH ARE DAMAGED BY THE CONTRACTORS, SHALL BE REPAIRED TO THE OWNER'S SATISFACTION AT THE CONTRACTOR'S EXPENSE.
9. CONTRACTOR IS RESPONSIBLE FOR SITE SAFETY DURING THE CONSTRUCTION OF THESE IMPROVEMENTS.
10. CONTRACTOR TO COORDINATE PRIVATE UTILITY REMOVAL / ABANDONMENT AND NECESSARY RELOCATION WITH RESPECTIVE UTILITY COMPANY. COORDINATION REQUIRED PRIOR TO CONSTRUCTION.
11. ALL DEMOLITION SHALL BE IN ACCORDANCE WITH THE APPROVED MUNICIPALITY RECYCLING PLAN.
12. ANY CONTAMINATED SOILS SHALL BE REMOVED IN ACCORDANCE WITH FEDERAL AND STATE REGULATIONS TO AN APPROVED LANDFILL.
13. ALL EXISTING UTILITIES TO BE FIELD LOCATED AND FLAGGED BY CONTRACTOR.
14. EXISTING FIBER OPTIC LINE TO BE CLEARLY MARKED PRIOR TO ANY EXCAVATION. CONTRACTOR TO NOTIFY ENGINEER IMMEDIATELY IF ANY DISCREPANCIES OCCUR IN THE LOCATION SHOWN OR PROPOSED IMPROVEMENTS IMPACTING EXISTING FIBER OPTIC LINE LOCATION.
15. SEWER ABANDONMENT SHALL BE IN ACCORDANCE WITH SECTION 3.2.24, OF THE STANDARD SPECIFICATIONS FOR WATER AND SEWER CONSTRUCTION IN WISCONSIN, LATEST ADDITION, AND CITY OF WAUKESHA SPECIFICATIONS.
16. WATER ABANDONMENT SHALL BE IN ACCORDANCE WITH SECTION 4.14.0 OF THE STANDARD SPECIFICATIONS FOR WATER AND SEWER CONSTRUCTION IN WISCONSIN, LATEST ADDITION, AND CITY OF WAUKESHA SPECIFICATIONS.
17. ALL PERIMETER EROSION CONTROL DEVICES SHALL BE INSTALLED PRIOR TO THE START OF DEMOLITION ACTIVITIES. CONTRACTOR SHALL KEEP ALL STREETS AND PAVEMENT FREE AND CLEAR OF ALL CONSTRUCTION RELATED DIRT, DUST AND DEBRIS.
18. BUILDING REMOVALS SHALL BE BY A QUALIFIED CONTRACTOR. CONTRACTOR TO FOLLOW ALL DEMOLITION REGULATIONS, DISCONNECT ALL UTILITIES, OBTAIN ALL APPLICABLE PERMITS AND DISPOSE OF ALL BUILDING MATERIALS IN APPROPRIATE LANDFILLS. DEMOLISHED MATERIALS SHALL NOT BE BURIED ON SITE. IF ENCOUNTERED, ANY CONTAMINATED SOILS SHALL BE REMOVED TO A LANDFILL IN ACCORDANCE WITH APPROPRIATE STATE AND FEDERAL REGULATIONS.
19. CONTRACTOR TO REMOVE EXISTING UTILITY PIPE OR PROVIDE PIPE BACK-FILLING AFTER REMOVAL OF EXISTING UTILITIES WITHIN BUILDING FOOTPRINT USING "LOW DENSITY CONCRETE/FLOWABLE FILL".
20. RESTORATION OF THE EXISTING ROADWAY RIGHT-OF-WAYS ARE CONSIDERED INCIDENTAL AND SHOULD BE PART OF THE COST OF THE UNDERGROUND IMPROVEMENTS, DEMOLITION AND REMOVAL. THIS INCLUDES CURB & GUTTER, SIDEWALK, TOPSOIL, SEEDING AND MULCHING.
21. WELL ABANDONMENT SHALL BE IN ACCORDANCE WITH WDNR AND LOCAL REGULATIONS. PROVIDE A COMPLETE RECORD OF CLOSURE (WDNR PERMIT 3300-005) COMPLETED BY A CONTRACTOR LICENSED TO PERFORM THAT WORK. CONTRACTOR SHALL SUBMIT DOCUMENTATION TO THE CITY OF WAUKESHA FOR CITY RECORDS.
22. THIS SITE WAS IDENTIFIED AS A CLOSED LEAKING UNDERGROUND STORAGE TANK (LUST) SITE. IF THE CONTRACTOR IDENTIFIES POTENTIALLY CONTAMINATED SOILS, THEY SHALL STOP WORK AND NOTIFY THE OWNER'S CONSTRUCTION REPRESENTATIVE. CONTAMINATED SOIL, IF ENCOUNTERED, SHALL BE MANAGED AND REMOVED IN ACCORDANCE WITH STATE AND FEDERAL REQUIREMENTS. COPIES OF ALL DISPOSABLE MANIFESTS SHALL BE PROVIDED TO THE OWNER.
23. CONTRACTOR SHALL FAMILIARIZE THEMSELVES WITH THIS PHASE I ESA PROVIDED BY THE OWNER.



LEGEND (DEMOLITION)

- PROPERTY LINE
- SETBACK LINE
- EASEMENT LINE
- DEMOLITION – REMOVAL OF CURB
- DEMOLITION – REMOVAL OF ASPHALT SURFACES
- DEMOLITION – REMOVAL OF CONCRETE SURFACES
- DEMOLITION – REMOVAL OF BUILDINGS/STRUCTURES
- DEMOLITION – REMOVAL OF UTILITIES
- DEMOLITION – REMOVAL OF LANDSCAPE BEDDING
- DEMOLITION – REMOVAL OF TREES
- DEMOLITION – REMOVAL OF SHRUBS
- PROTECT EXISTING TREE

north

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20' 0 20'

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P. 608.848.5060

CLIENT:
SUMMIT CREDIT UNION

CLIENT ADDRESS:
4800 American Parkway
MADISON, WI 53718

PROJECT:
SUMMIT CREDIT UNION - WAUKESHA BRANCH

PROJECT LOCATION:
2208 E MORELAND BOULEVARD
WAUKESHA COUNTY

PLAN MODIFICATIONS:

#	Date:	Description:
1	04.09.18	CITY PLAN REVIEW
2	05.14.18	CITY RESUBMITTAL

Design/Drawn: KWH
Approved: WHD

SHEET TITLE:
DEMOLITION PLAN

SHEET NUMBER:
C1.0

JSD PROJECT NO: 18-8469

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GENERAL NOTES

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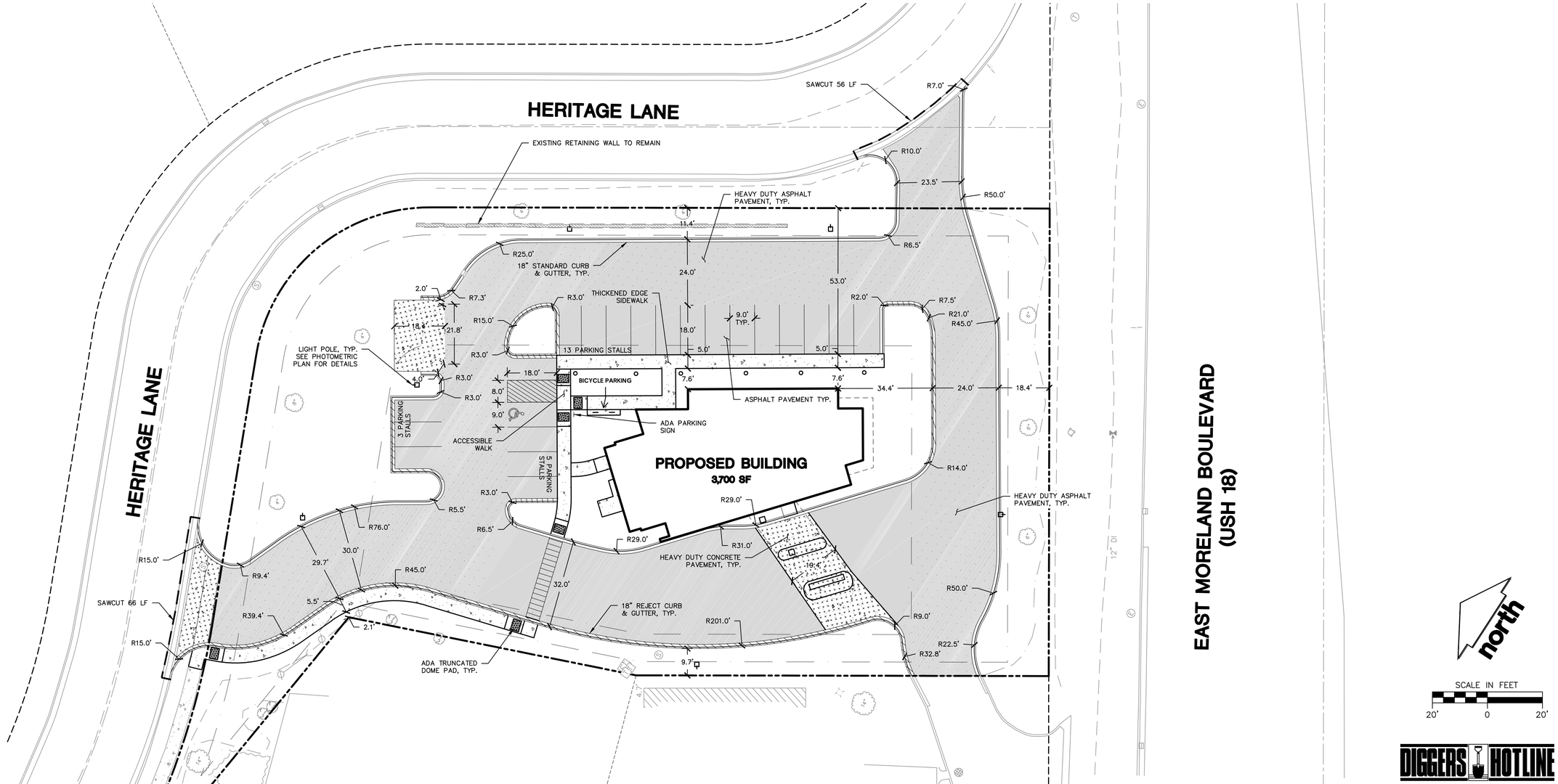
SITE PLAN NOTES

1. ALL DIMENSIONS TO FACE OF CURB AND/OR EDGING OF CONCRETE UNLESS OTHERWISE NOTED.
2. ALL RADII TO FACE OF CURB AND/OR EDGING OF CONCRETE UNLESS OTHERWISE NOTED.
3. ANY REQUIRED REPLACEMENT OF PUBLIC CURB AND GUTTER SHALL MATCH EXISTING AND MEET THE REQUIREMENTS OF THE CITY OF WAUKESHA.
4. CONTRACTOR SHALL PROVIDE CONTROL JOINTS AND CONSTRUCTION JOINTS OF ONE-QUARTER CONCRETE THICKNESS AT AN EQUAL RATIO OF LENGTH TO WIDTH WHEREVER POSSIBLE WITH A MAXIMUM LENGTH BETWEEN JOINTS OF 8' ON CENTER
5. CONTRACTOR SHALL PROVIDE EXPANSION JOINTS IN SIDEWALKS AT A MAXIMUM 24' ON CENTER
6. EXTERIOR CONCRETE SURFACES SHALL BE BROOM FINISHED.
7. ALL CONCRETE SURFACES TO BE SEALED WITH TYPE TK-26UV CONCRETE SEALANT.
8. USE 4" WIDE, HIGH VISIBILITY YELLOW LATEX PAINT FOR STALL LINES.
9. MARK AND STRIPE ADA PARKING SPACES APPROPRIATELY.
10. 2' x 4' TRUNCATED DOME WARNING DETECTION FIELD SHALL BE PLACED AT ALL ADA RAMPS.
11. ALL PAVEMENT MARKINGS INCLUDING: STOP BARS, CROSSWALKS, DIRECTIONAL ARROWS, PARKING STALL LINES, ADA STALL MARKINGS, NO PARKING ZONES, DROP-OFF/PICK-UP ZONES SHALL BE PAINTED WITH LATEX PAINT PER MUNICIPALITY SPECIFICATIONS.

SITE INFORMATION BLOCK	
Owner Information:	SUMMIT CREDIT UNION 4800 AMERICAN PARKWAY MADISON, WI 53718
Site Address	LOT 1 OF CSM #10663 2208 EAST MORELAND, WAUKESHA, WI
Site Acreage (total)	1.133 ACRES
Number of Building Stories (above grade)	1
Total Square Footage of Building	3,700 S.F.
Number of parking stalls:	
Large car	19
Accessible	1
Total	20
Existing vs. Proposed Site Coverage:	
Existing Impervious Surface Area	32,752
Existing Pervious Surface Area	16,601
Proposed Impervious Surface Area	30,820
Proposed Pervious Surface Area	18,533
Proposed Impervious Surface Area Ratio	0.624

LEGEND (PROPOSED)

- PROPERTY LINE
- SETBACK LINE
- EASEMENT LINE
- BUILDING LINE
- BUILDING OVERHANG LINE
- EDGE OF CONCRETE
- STANDARD CURB AND GUTTER
- REJECT CURB AND GUTTER
- PROPOSED CONCRETE PAVEMENT
- PROPOSED HEAVY DUTY CONCRETE PAVEMENT
- PROPOSED ASPHALT PAVEMENT
- PROPOSED HEAVY DUTY ASPHALT PAVEMENT
- LIGHT POLE
- BOLLARD



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Design/Drawn: CLH
Approved: WHD

SHEET TITLE:
SITE PLAN

SHEET NUMBER:
C2.0

JSD PROJECT NO: 18-8469

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I:\2018\188469\DWG\188469 Con Docs.dwg Layout: C2.0 User: msaunders Plotted: May 14, 2018 - 11:36am Xrefs:

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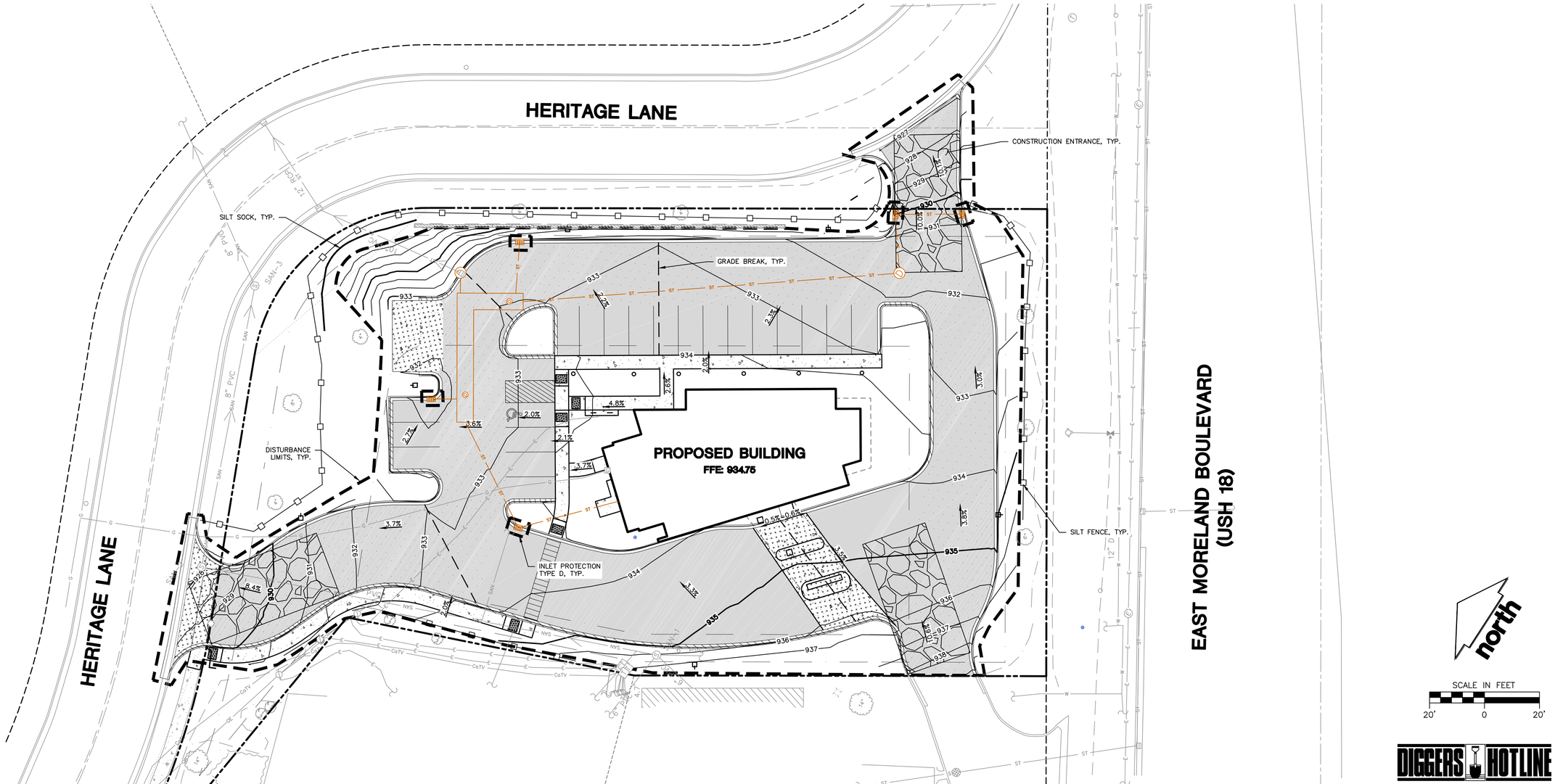
CONSTRUCTION SITE EROSION CONTROL REQUIREMENTS (CSECR) NOTES:

1. ALL EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE DESIGNED AND IMPLEMENTED IN ACCORDANCE WITH THE CURRENT DEPARTMENT OF NATURAL RESOURCES EROSION AND SEDIMENT CONTROL TECHNICAL STANDARDS WHICH ARE AVAILABLE AT: http://www.dnr.state.wi.us/runoff/stormwater/techstds.htm
2. INSTALL EROSION CONTROL MEASURES PRIOR TO ANY SITE WORK, INCLUDING GRADING OR DISTURBANCE OF EXISTING SURFACE MATERIALS AS SHOWN ON PLAN. MODIFICATIONS TO SEDIMENT CONTROL DESIGN MAY BE CONDUCTED TO MEET UNFORESEEN FIELD CONDITIONS IF MODIFICATIONS CONFORM TO WDNR TECHNICAL STANDARDS.
3. INSPECTIONS AND MAINTENANCE OF ALL EROSION CONTROL MEASURES SHALL BE ROUTINE (ONCE PER WEEK MINIMUM) TO ENSURE PROPER FUNCTION OF EROSION CONTROLS AT ALL TIMES. EROSION CONTROL MEASURES ARE TO BE IN WORKING ORDER AT THE END OF EACH WORK DAY.
4. INSPECT EROSION CONTROL MEASURES AFTER EACH 1/2" OR GREATER RAINFALL. REPAIR ANY DAMAGE OBSERVED DURING THE INSPECTION.
5. EROSION CONTROL MEASURES SHALL NOT BE REMOVED UNTIL ALL LAND DISTURBING CONSTRUCTION ACTIVITY AT THE SITE HAS BEEN COMPLETED AND THAT A UNIFORM PERENNIAL VEGETATIVE COVER HAS BEEN ESTABLISHED WITH A DENSITY OF AT LEAST 70% OF THE COVER FOR THE UNPAVED AREAS AND AREAS NOT COVERED BY PERMANENT STRUCTURES OR THAT EMPLOY EQUIVALENT PERMANENT STABILIZATION MEASURES.
6. INSTALL A TRACKING PAD, 50' LONG AND NO LESS THAN 12" THICK BY USE OF 3" CLEAR STONE. TRACKING PADS ARE TO BE MAINTAINED BY THE CONTRACTOR IN A CONDITION WHICH WILL PREVENT THE TRACKING OF MUD OR DRY SEDIMENT ONTO THE ADJACENT PUBLIC STREETS AFTER EACH WORKING DAY OR MORE FREQUENTLY AS REQUIRED.
7. INSTALL EROSION CONTROLS ON THE DOWNSTREAM SIDE OF STOCKPILES.
8. INSTALL TEMPORARY SEDIMENT TRAPS PER LATEST EDITION OF WDNR STORM WATER CONSTRUCTION TECHNICAL CONSTRUCTION SITE EROSION & SEDIMENT CONTROL STANDARDS NOTE 1063. SEDIMENT TRAPS SHALL BE SIZED BASED ON MEDIUM SOIL TEXTURAL CLASS. SEDIMENT TRAPS SHALL BE INSPECTED WITHIN 24 HOURS AFTER EVERY RAIN EVENT PRODUCING 0.5 INCHES OF RAIN OR MORE AND AT A MINIMUM SEDIMENT SHALL BE REMOVED WHEN SEDIMENT REACHES A DEPTH OF 1 FOOT OR WHEN OUTLET BECOMES CLOGGED. SEDIMENT TRAPS SHALL BE REMOVED AND THE LOCATION STABILIZED AFTER THE DISTURBED AREA DRAINING TO THE SEDIMENT TRAP IS STABILIZED AND NO LONGER SUSCEPTIBLE TO EROSION. ALL SEDIMENT SHALL BE PROPERLY DISPOSED.
9. INSTALL CHECK DAMS WITHIN DRAINAGE DITCHES AND IN FRONT OF SILT FENCING IN ANY LOW AREA ALL IN ACCORDANCE WITH WDNR TECHNICAL STANDARDS.
10. EROSION CONTROL FOR UTILITY CONSTRUCTION (STORM SEWER, SANITARY SEWER, WATER MAIN, ETC.):
    A. PLACE EXCAVATED TRENCH MATERIAL ON THE HIGH SIDE OF THE TRENCH.
    B. BACKFILL, COMPACT, AND STABILIZE THE TRENCH IMMEDIATELY AFTER PIPE CONSTRUCTION.
    C. DISCHARGE TRENCH WATER INTO A SEDIMENTATION BASIN OR FILTERING TANK IN ACCORDANCE WITH THE DEWATERING TECHNICAL STANDARD NO. 1061 PRIOR TO RELEASE INTO THE STORM SEWER, RECEIVING STREAM, OR DRAINAGE DITCH.
11. ADDITIONAL EROSION CONTROL MEASURES, AS REQUESTED BY STATE INSPECTORS, LOCAL INSPECTORS, AND/OR ENGINEER SHALL BE INSTALLED WITHIN 24 HOURS OF REQUEST.
12. ALL SLOPES 4:1 OR GREATER SHALL BE STABILIZED WITH CLASS I, TYPE B EROSION MATTING AND DRAINAGE SWALES SHALL BE STABILIZED WITH CLASS II, TYPE B EROSION MATTING, WITHIN 7 DAYS OF REACHING FINAL GRADE AND/OR AS SOON AS CONDITIONS ALLOW. REFER BELOW TO "CSECR" NOTE NO. SIXTEEN (16) FOR STABILIZATION PRACTICES FOR POTENTIAL INTERIM STABILIZATION.
13. CONTRACTOR/OWNER SHALL FILE A NOTICE OF TERMINATION UPON VEGETATIVE STABILIZATION AND/OR PROPERTY SALE IN ACCORDANCE WITH WDNR REQUIREMENTS.
14. CONTRACTOR SHALL TAKE ALL NECESSARY STEPS TO CONTROL DUST ARISING FROM CONSTRUCTION OPERATIONS. REFER TO WDNR TECHNICAL STANDARD 1068.
15. SILT FENCE LOCATION REPRESENTED ON SHEET C2.0 INDICATES DISTURBANCE LIMITS. REFER TO CSECR NOTE 14 FOR DETAILS.
16. STABILIZATION PRACTICES:
    - 16.1. * STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICABLE IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED. NO MORE THAN SEVEN (7) DAYS SHALL PASS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS CEASED UNLESS:
    - 16.2. * THE INITIATION STABILIZATION MEASURES BY THE SEVENTH (7) DAY AFTER CONSTRUCTION ACTIVITY HAS CEASED IS PRECLUDED BY SNOW COVER. IN THAT EVENT, STABILIZATION SHALL BE INITIATED AS SOON AS PRACTICABLE.
    - 16.3. * CONSTRUCTION ACTIVITY WILL RESUME ON A PORTION OF THE SITE WITHIN FOURTEEN (14) DAYS FROM WHEN ACTIVITY CEASED, (I.E. THE TOTAL TIME PERIOD THAT THE CONSTRUCTION ACTIVITY IS TEMPORARILY CEASED IS LESS THAN FOURTEEN (14) DAYS. IN THAT EVENT, STABILIZATION MEASURES DO NOT HAVE TO BE INITIATED ON THAT PORTION OF THE SITE BY THE SEVENTH (7) DAY AFTER CONSTRUCTION ACTIVITY HAS TEMPORARILY CEASED.
    - 16.4. * STABILIZATION MEASURES SHALL BE DETERMINED BASED ON SITE CONDITIONS AT THE TIME OF CONSTRUCTION ACTIVITY HAS CEASED, INCLUDING BUT NOT LIMITED TO WEATHER CONDITIONS AND LENGTH OF TIME MEASURE MUST BE EFFECTIVE. THE FOLLOWING ARE ACCEPTABLE STABILIZATION MEASURES:
      * PERMANENT SEEDING; IN ACCORDANCE WITH APPROVED CONSTRUCTION SPECIFICATION
      * TEMPORARY SEEDING; MAY CONSIST OF SPRING OATS(100LBS/ACRE) AND/OR WHEAT OR CEREAL RYE (150LB/ACRE)
      * HYDRO-MULCHING WITH A TACKIFIER
      * GEOTEXTILE EROSION MATTING
      * SODDING

LEGEND (GRADING AND EROSION CONTROL PLAN)

- PROPERTY LINE
- SETBACK LINE
- EASEMENT LINE
- BUILDING LINE
- BUILDING OVERHANG LINE
- 978 EXISTING 1' CONTOUR
- 978 EXISTING 5' CONTOUR
- 978 PROPOSED 1' CONTOUR
- 978 PROPOSED 5' CONTOUR
- ST STORM SEWER
- GRADE BREAK
- SPOT ELEVATION
  - EP – EDGE OF PAVEMENT
  - FG – FINISH GRADE
  - EC – EDGE OF CONCRETE
  - BC – BACK OF CURB
  - TW – TOP OF WALL
  - BW – BOTTOM OF WALL
  - RIM – RIM ELEVATION
- 934.20 FG
- SILT FENCE
- SILT SOCK
- DISTURBANCE LIMITS
- INLET PROTECTION, TYPE D



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CLIENT:
SUMMIT CREDIT UNION

CLIENT ADDRESS:
4800 American Parkway
MADISON, WI 53718

PROJECT:
SUMMIT CREDIT UNION - WAUKESHA BRANCH

PROJECT LOCATION:
2208 E MORELAND BOULEVARD
WAUKESHA COUNTY

PLAN MODIFICATIONS:

#	Date:	Description:
1	04.09.18	CITY PLAN REVIEW
2	05.14.18	CITY RESUBMITTAL
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Design/Drawn: CLH
Approved: WHD

SHEET TITLE:
GRADING AND EROSION CONTROL PLAN

SHEET NUMBER:
C3.0

JSD PROJECT NO: 18-8469

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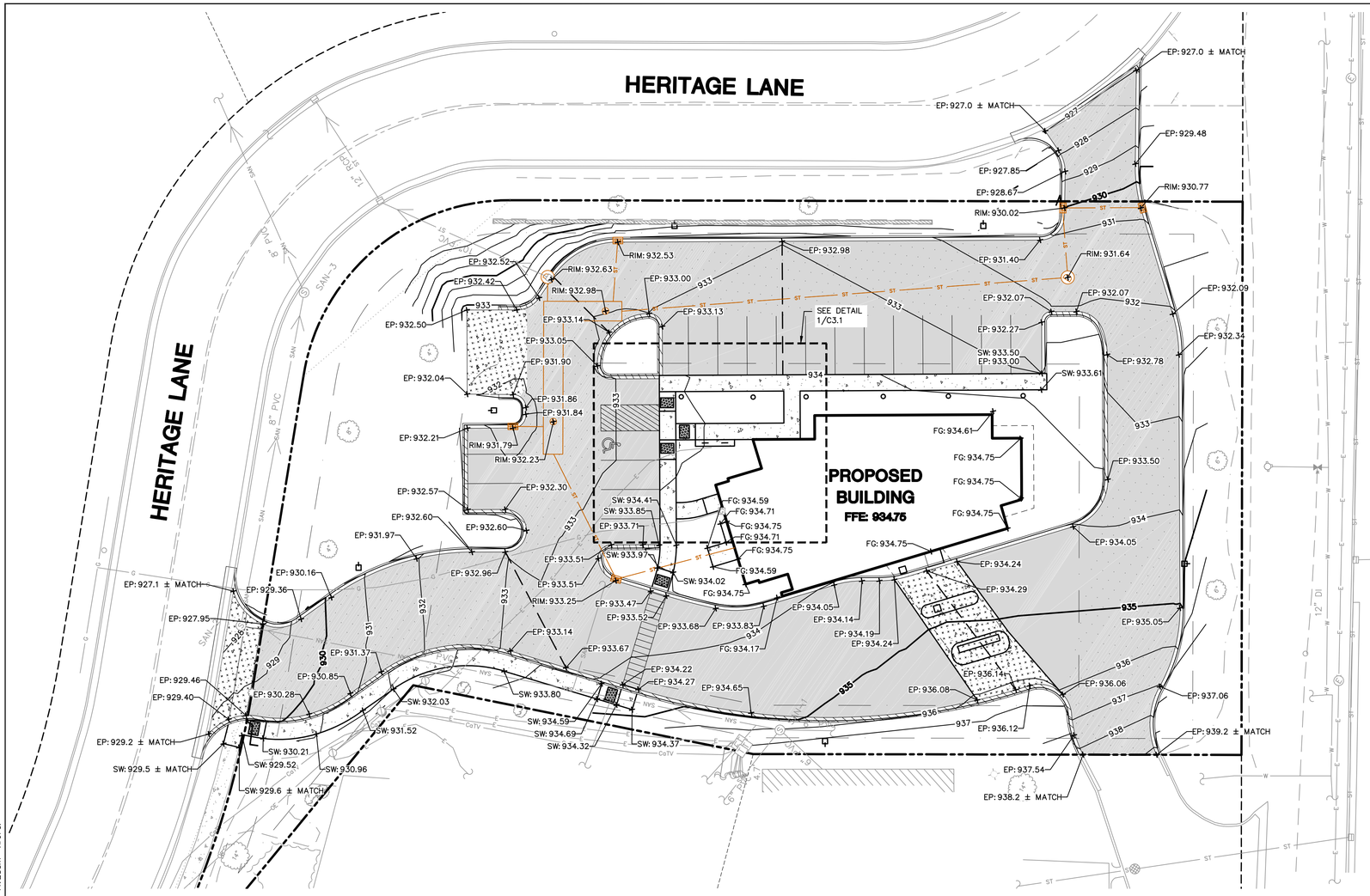

1 C3.1 DETAILED ENTRY GRADING

LEGEND (GRADING PLAN)

- PROPERTY LINE
- SETBACK LINE
- EASEMENT LINE
- BUILDING LINE
- BUILDING OVERHANG LINE
- 978 EXISTING 1' CONTOUR
- 978 EXISTING 5' CONTOUR
- 978 PROPOSED 1' CONTOUR
- 978 PROPOSED 5' CONTOUR
- ST STORM SEWER
- GRADE BREAK
- SPOT ELEVATION
  - EP – EDGE OF PAVEMENT
  - FG – FINISH GRADE
  - EC – EDGE OF CONCRETE
  - BC – BACK OF CURB
  - TW – TOP OF WALL
  - BW – BOTTOM OF WALL
  - RIM – RIM ELEVATION

934.20 FG

north

SCALE IN FEET
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SHEET TITLE:
DETAILED GRADING PLAN

SHEET NUMBER:
C3.1

JSD PROJECT NO: 18-8469

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GENERAL NOTES

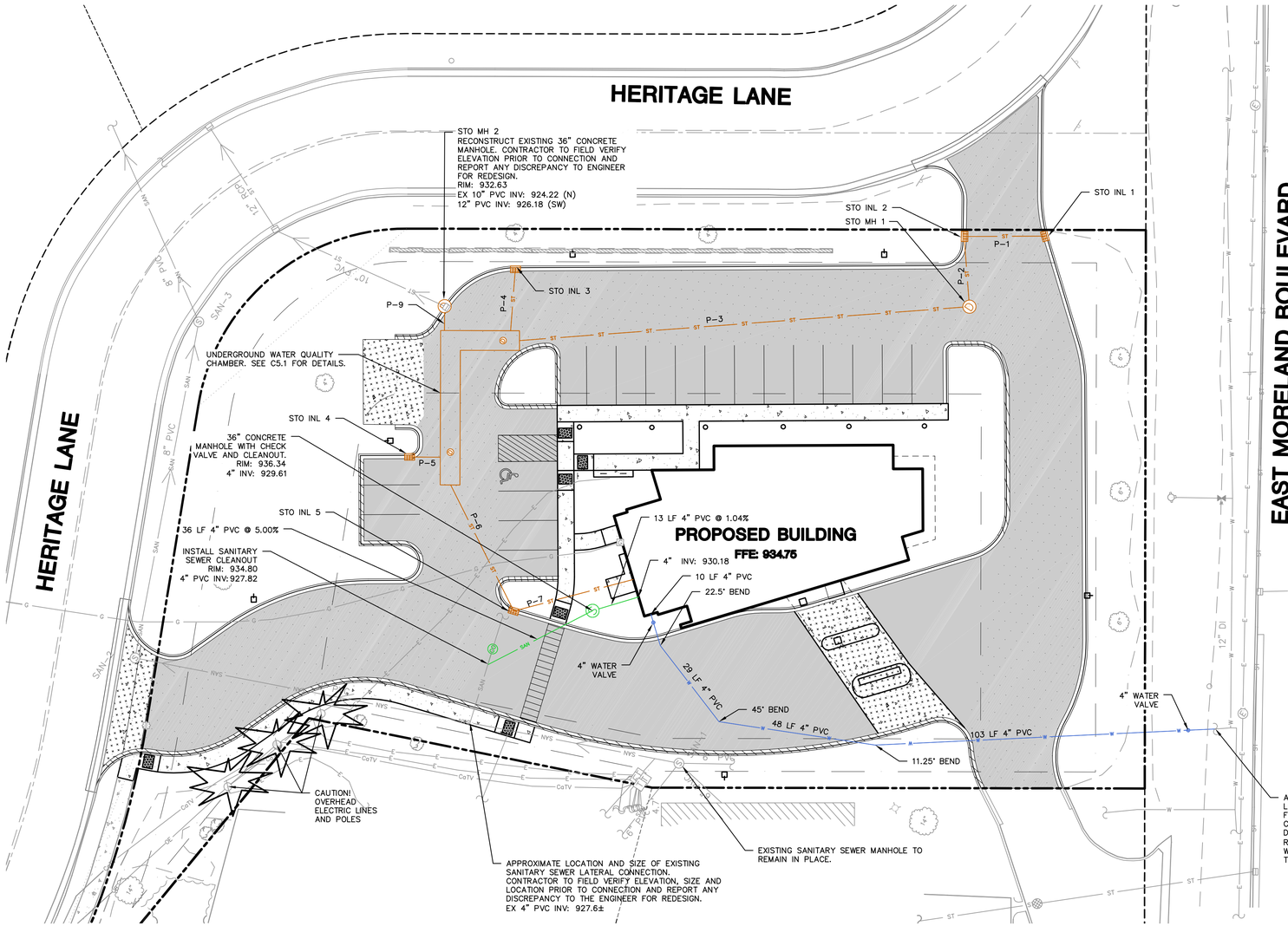
1. REFER TO THE EXISTING CONDITIONS SURVEY FOR EXISTING CONDITIONS NOTES AND LEGENDS.
2. ALL WORK IN THE ROW SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR SEWER & WATER CONSTRUCTION IN WISCONSIN, LATEST EDITION AND CITY OF WAUKESHA REQUIREMENTS.
3. NO SITE GRADING OUTSIDE OR DOWNSLOPE OF PROPOSED SILT FENCE LOCATION. NO LAND DISTURBANCE BEYOND PROPERTY LINES UNLESS OTHERWISE SHOWN.
4. THIS PROJECT HAS BEEN DESIGNED AND WILL BE CONSTRUCTED IN COMPLIANCE WITH ALL OF THE WDNR WRAPP PERMIT APPLICATION STANDARDS.
5. JSD SHALL BE HELD HARMLESS AND DOES NOT WARRANT ANY DEVIATIONS BY THE OWNER/CONTRACTOR FROM THE APPROVED CONSTRUCTION PLANS THAT MAY RESULT IN DISCIPLINARY ACTIONS BY ANY OR ALL REGULATORY AGENCIES.

PROPOSED STORM SEWER STRUCTURES SCHEDULE

LABEL	INVERT ELEV. (FT)	RIM ELEV. (FT)	DEPTH (FT)	STRUCTURE DESCRIPTION	GRATE
STO INL-1	927.94	930.77	2.83	2'X3' INLET BOX	R-3067, CURB INLET FRAME, GRATE, CURB BOX - TYPE L GRATE
STO INL-2	927.78	930.05	2.27	2'X3' INLET BOX	R-3067, CURB INLET FRAME, GRATE, CURB BOX - TYPE L GRATE
STO INL-3	929.70	932.53	2.83	2'X3' INLET BOX	R-3067, CURB INLET FRAME, GRATE, CURB BOX - TYPE L GRATE
STO INL-4	928.93	931.79	2.86	2'X3' INLET BOX	R-3067, CURB INLET FRAME, GRATE, CURB BOX - TYPE L GRATE
STO INL-5	929.61	933.25	3.64	2'X3' INLET BOX	R-3067, CURB INLET FRAME, GRATE, CURB BOX - TYPE L GRATE
STO MH 1	927.60	932.23	4.63	36" DIA. MANHOLE	R-1550A MANHOLE FRAME -SOLID LID NON-ROCKING
STM MH 2	924.22	934.51	10.29	36" DIA. MANHOLE	R-3067, CURB INLET FRAME, GRATE, CURB BOX - TYPE L GRATE
WQ Chamber	926.25	934.87	8.62	2 - ACCESS RISERS	R-1550A MANHOLE FRAME -SOLID LID NON-ROCKING

PROPOSED STORM SEWER PIPE SCHEDULE

PIPE LABEL	FROM	TO	LENGTH (FT)	INVERT ELEVATION (FT)	DISCHARGE ELEVATION (FT)	SLOPE (%)	PIPE SIZE & TYPE
P-1	STO INL-1	STO INL-2	23.00	927.88	927.94	0.25	10" PVC
P-2	STO INL-2	STO MH 1	20.00	927.70	927.78	0.40	12" PVC
P-3	STO MH 1	WQ Chamber	137.00	926.25	927.60	0.98	12" PVC
P-4	STO INL-3	WQ Chamber	19.00	928.75	929.70	5.00	6" PVC
P-5	STO INL-4	WQ Chamber	9.00	928.75	928.93	2.00	6" PVC
P-6	STO INL-5	WQ Chamber	43.00	928.75	929.61	2.00	6" PVC
P-8	RD	STO INL-5	38.00	929.71	930.47	2.00	6" PVC
P-9	WQ Chamber	STO MH 2	7.40	926.18	926.25	1.00	12" PVC



LEGEND (UTILITY PLAN)

- PROPERTY LINE
- SETBACK LINE
- EASEMENT LINE
- BUILDING LINE
- BUILDING OVERHANG LINE
- SAN — SANITARY SEWER
- W — WATERMAIN
- ST — STORM SEWER

UTILITY NOTES:

1. IF ANY ERRORS, DISCREPANCIES, OR OMISSIONS WITHIN THE PLAN BECOME APPARENT, IT SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO CONSTRUCTION SO THAT CLARIFICATION OR REDESIGN MAY OCCUR.
2. LENGTHS OF ALL UTILITIES ARE TO CENTER OF STRUCTURES OR FITTINGS AND MAY VARY SLIGHTLY FROM PLAN. LENGTHS SHALL BE VERIFIED IN THE FIELD DURING CONSTRUCTION.
3. THE CONTRACTOR SHALL INSTALL A PEDESTRIAN FENCE AROUND ALL EXCAVATIONS TO BE LEFT OPEN OVER NIGHT AS REQUIRED.
4. THE PROPOSED IMPROVEMENTS MUST BE CONSTRUCTED IN ACCORDANCE WITH ENGINEERING PLANS DESIGNED TO MEET ORDINANCES AND REQUIREMENTS OF THE MUNICIPALITY AND WISDOT, WDSPS, AND WDNR.
5. PRIOR TO CONSTRUCTION, THE CONTRACTOR IS RESPONSIBLE FOR:
   - EXAMINING ALL SITE CONDITIONS RELATIVE TO THE CONDITIONS INDICATED ON THE ENGINEERING DRAWINGS. ANY DISCREPANCIES ARE TO BE REPORTED TO THE ENGINEER AND RESOLVED PRIOR TO THE START OF CONSTRUCTION.
   - OBTAINING ALL PERMITS INCLUDING PERMIT COSTS, TAP FEES, METER DEPOSITS, BONDS, AND ALL OTHER FEES REQUIRED FOR PROPOSED WORK TO OBTAIN OCCUPANCY.
   - VERIFYING UTILITY ELEVATIONS AND NOTIFYING ENGINEER OF ANY DISCREPANCY. NO WORK SHALL BE PERFORMED UNTIL THE DISCREPANCY IS RESOLVED.
   - NOTIFYING ALL UTILITIES PRIOR TO THE INSTALLATION OF ANY UNDERGROUND IMPROVEMENTS.
   - NOTIFYING THE DESIGN ENGINEER AND MUNICIPALITY 48 HOURS PRIOR TO THE START OF CONSTRUCTION TO ARRANGE FOR APPROPRIATE CONSTRUCTION OBSERVATION.
7. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING THE ENGINEER WITH AS–BUILT CONDITIONS OF THE DESIGNATED IMPROVEMENTS IN ORDER THAT THE APPROPRIATE DRAWINGS CAN BE PREPARED, IF REQUIRED. ANY CHANGES TO THE DRAWINGS OR ADDITIONAL ITEMS MUST BE REPORTED TO THE ENGINEER AS WORK PROGRESSES.
8. THE PRIME CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL CONSTRUCTION WITH OTHER CONTRACTORS INVOLVED WITH CONSTRUCTION OF THE PROPOSED DEVELOPMENT AND FOR REPORTING ANY ERRORS OR DISCREPANCIES BETWEEN THESE PLANS AND PLANS PREPARED BY OTHERS.
9. ANY SANITARY SEWER, SANITARY SEWER SERVICES, WATER MAIN, WATER SERVICES, STORM SEWER, OR OTHER UTILITIES, WHICH ARE DAMAGED BY THE CONTRACTORS, SHALL BE REPAIRED TO THE OWNER'S SATISFACTION AT THE CONTRACTOR'S EXPENSE.
10. CONTRACTOR IS RESPONSIBLE FOR SITE SAFETY DURING THE CONSTRUCTION OF IMPROVEMENTS.
11. CONTRACTOR SHALL CONTACT THE CITY OF WAUKESHA PUBLIC WORKS DEPARTMENT A MINIMUM OF 48 HOURS BEFORE CONNECTING TO PUBLIC UTILITIES. CONTRACTOR TO VERIFY SIZE AND DEPTH OF EXISTING UTILITY SERVICES AND REPORT ANY DISCREPANCIES TO THE ENGINEER PRIOR TO CONNECTING.
12. CONTRACTOR MUST CONTACT AND IS REQUIRED TO NOTIFY THE CITY OF WAUKESHA WATER UTILITY 48 HOURS IN ADVANCE OF CONNECTING TO THE PUBLIC UTILITY.
13. ALL WATER MAIN MUST BE GAPPED AT EVERY 2,000 FOOT INTERVAL. WATER MAIN MUST BE FILLED AND SAFE WATER TESTED PRIOR TO FILLING AND FLUSHING ANY ADDITIONAL 2,000 FOOT PIPE SEGMENTS, PER VILLAGE OF COTTAGE GROVE WATER & SEWER UTILITY; WATER MAIN INSTALLATION SEQUENCE.
    WATER MAIN INSTALLATION SEQUENCE:
    - INSTALL WATER MAIN – MUST LEAVE A GAP AT THE EXISTING MAIN.
    - FILL WATER MAIN (PRESSURE TEST THE WATER MAIN. CONTRACTOR OPTION)
    - OBTAIN A SAFE WATER SAMPLE
    - TAP SERVICES. TAPS MUST BE MADE UNDER SYSTEM PRESSURE
    - PRESSURE TEST MAIN
    - MAKE WET CONNECTION TO EXISTING WATER MAIN
    - CONNECTION WILL ALSO BE REQUIRED WHEN THE FOLLOWING CONDITIONS ARE MET: WATER MAIN INSTALLATION UP TO 2000' AND/OR 30 DAYS OF INACTIVITY OF WATER MAIN INSTALLATION, WHICH EVER COMES FIRST.
14. ALL PRIVATE SANITARY BUILDING PIPE AND TUBING SHALL CONFORM TO SPS 384.30–2.
15. ALL PRIVATE STORM BUILDING PIPE AND TUBING SHALL CONFORM TO SPS 384.30–3.
16. ALL PRIVATE PIPE AND TUBING FOR WATER SERVICE SHALL CONFORM TO SPS 384.30–4.
17. ALL PRIVATE STORM PIPE SHALL CONFORM TO SPS 382.40(8)(B)4.A.
18. ALL PRIVATE PIPE SHALL BE INSTALLED PER SPS 382.40–8 INCLUDING AT LEAST 8' OF HORIZONTAL DISTANCE BETWEEN WATER PIPING AND SANITARY SEWER FROM CENTER OF PIPE TO CENTER OF PIPE AND 6' OF SEPARATION BETWEEN STORM SEWER AND WATER PIPING.
19. ALL LOCATIONS WHERE STORM SEWER AND WATER MAIN ARE CROSSING AND LESS THAN 3 FEET OF VERTICAL/HORIZONTAL SEPARATION IS PROVIDED, WATER MAIN SHALL BE INSULATED PER STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN LATEST EDITION. INSULATION SHALL CREATE A "BOX" ENCLOSING THE TOP AND SIDES OF WATER MAIN.
20. ADJUST ALL EXISTING PUBLIC WATER VALVE BOXES, HYDRANTS, MANHOLE CASTINGS, AND INLET CASTINGS TO GRADE WITH ACCORDANCE WITH THE STANDARDS OF THE MUNICIPALITY. REPLACE VALVE BOXES, HYDRANT SHOES, AND MANHOLE/INLET SECTIONS AS REQUIRED.
21. SEE ELECTRICAL AND LIGHTING PLANS FOR SITE ELECTRIC, CABLE AND FIBER OPTICS FOR DETAILS AND ROUTING.
22. ALL CONNECTIONS TO WATER QUALITY CHAMBER SHALL BE PREFABRICATED WATERTIGHT CONNECTIONS.

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Approved: WHD

SHEET TITLE:
UTILITY PLAN

SHEET NUMBER:
C4.0

JSD PROJECT NO: 18-8469

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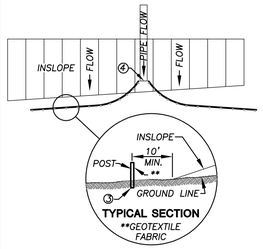
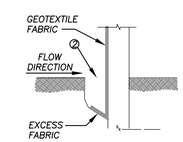
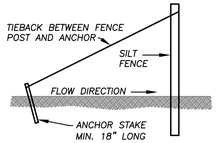


TYPICAL SECTION
**GEOTEXTILE FABRIC

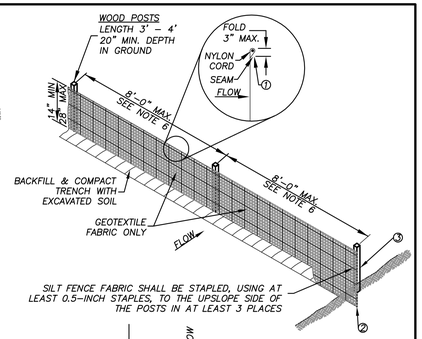


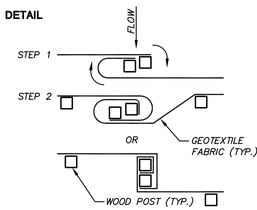
NOTE: ADDITIONAL POST DEPTH OR TIE BACKS MAY BE REQUIRED IN UNSTABLE SOILS

TRENCH DETAIL

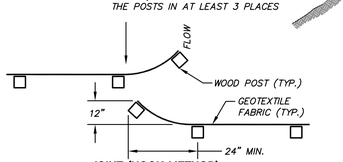


SILT FENCE TIE BACK
(WHEN ADDITIONAL SUPPORT REQUIRED)





JOINT (TWIST METHOD)



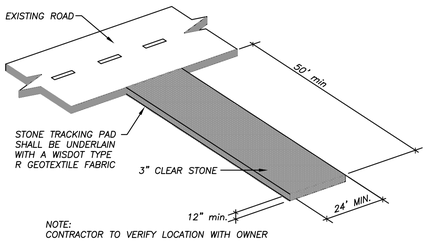
JOINT (HOOK METHOD)

SILT FENCE

N.T.S.

SILT FENCE ALONG SLOPES & OUTFALLS

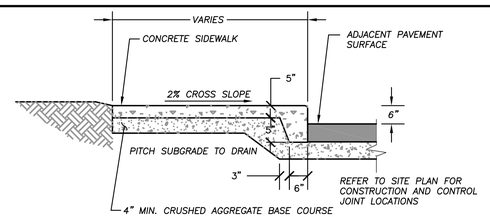
1. SILT FENCE SHALL BE ANCHORED BY SPREADING AT LEAST 8 INCHES OF FABRIC IN A 4" WIDE AND 6" DEEP TRENCH OR 6 INCH DEEP V–TRENCH ON THE UPSLOPE SIDE OF THE FENCE. TRENCHES SHALL NOT BE EXCAVATED WIDER OR DEEPER THAN NECESSARY FOR PROPER INSTALLATION.
2. FOLD MATERIAL TO FIT TRENCH AND BACKFILL AND COMPACT TRENCH WITH EXCAVATED SOIL.
3. WOOD POSTS SHALL BE A MINIMUM SIZE OF 1 1/8" x 1 1/8" OF DRIED OAK OR HICKORY.
4. SILT FENCE TO EXTEND ABOVE THE TOP OF PIPE.
5. SILT FENCE CONSTRUCTION AND GEOTEXTILE FABRIC SHALL CONFORM TO WDNR TECHNICAL STANDARD 1056.
6. POST SPACING SHALL BE SELECTED BASED ON GEOTEXTILE FABRIC (8'–0" FOR WOVEN & 3'–0" FOR NON–WOVEN)



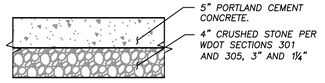
NOTE:
CONTRACTOR TO VERIFY LOCATION WITH OWNER

CONSTRUCTION ENTRANCE

N.T.S.



THICKENED EDGE SIDEWALK

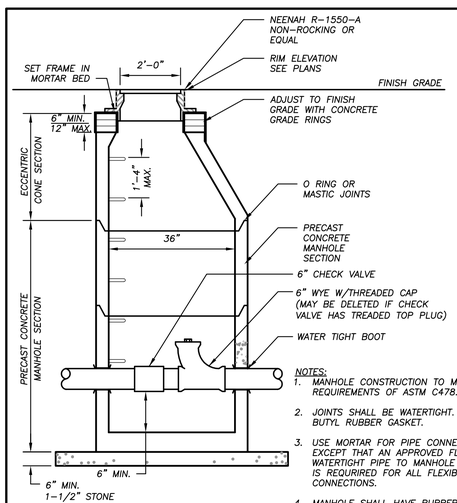


CONCRETE SIDEWALK SECTION

NOTES:
1. REFER TO GEOTECHNICAL REPORT FOR ADDITIONAL INFORMATION. IF THERE ARE ANY DISCREPANCIES BETWEEN THIS DETAIL AND GEOTECHNICAL REPORT, THE GEOTECHNICAL REPORT SHALL GOVERN.
2. WISDOT STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION, INCLUDING SUPPLEMENTAL SPECIFICATIONS, BUT EXCLUDING LIMITATIONS IN SECTION 460.3.2 RESTRICTING LAYER THICKNESS BY AGGREGATE SIZE.
3. COMPACTION REQUIREMENTS:
   – BITUMINOUS CONCRETE: REFER TO SECTION 460–3.
   – BASE COURSE: REFER TO SECTION 301.3.4.2, STANDARD COMPACTION
4. CONCRETE PADS SHALL HAVE A WIRE REINFORCEMENT MESH (W6X6, 2.9X2.9) FOR CRACK CONTROL.
5. AGGREGATE BASE SHALL BE 3" MINUS UP TO 3 " BELOW PAVEMENT AND 1¼" MINUS TO PAVEMENT.

SIDEWALK SECTIONS

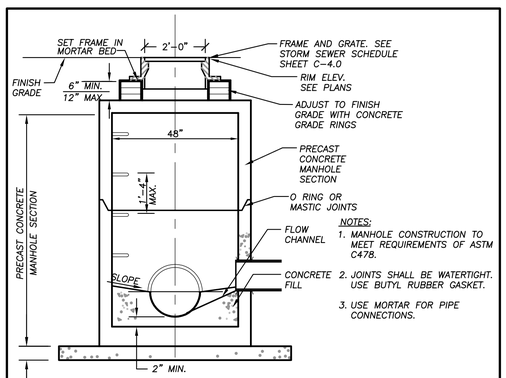
N.T.S.



NOTES:
1. MANHOLE CONSTRUCTION TO MEET REQUIREMENTS OF ASTM C478.
2. JOINTS SHALL BE WATERTIGHT. USE BUTYL RUBBER GASKET.
3. USE MORTAR FOR PIPE CONNECTIONS EXCEPT THAT AN APPROVED FLEXIBILE WATERTIGHT PIPE TO MANHOLE SEAL IS REQUIRED FOR ALL FLEXIBLE CONNECTIONS.
4. MANHOLE SHALL HAVE RUBBER CHIMNEY BOOT SEAL.
5. CASTING SHALL BE LABELED "STORM" OR "SANITARY" AS APPROPRIATE.
6. CHECK VALVE SHALL BE 6" PVC BACKWATER VALVE WITH EPDM FLAPPER SEAL

CHECK VALVE/CLEANOUT

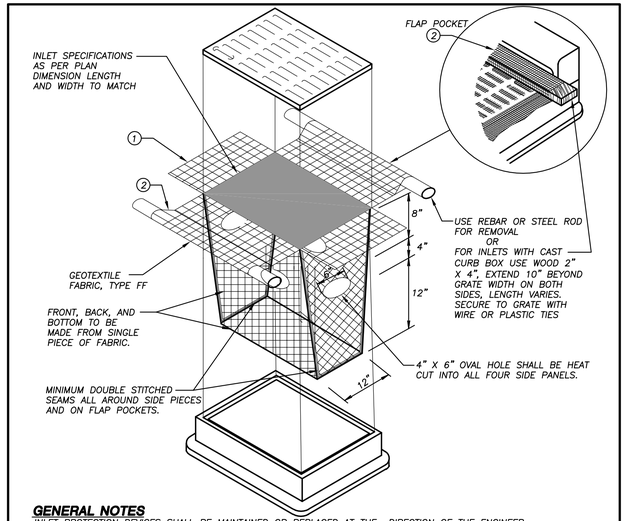
N.T.S.



NOTES:
1. MANHOLE CONSTRUCTION TO MEET REQUIREMENTS OF ASTM C478.
2. JOINTS SHALL BE WATERTIGHT. USE BUTYL RUBBER GASKET.
3. USE MORTAR FOR PIPE CONNECTIONS.

STORM MANHOLE

N.T.S.



GENERAL NOTES

INLET PROTECTION DEVICES SHALL BE MAINTAINED OR REPLACED AT THE DIRECTION OF THE ENGINEER.

MANUFACTURED ALTERNATIVES APPROVED AND LISTED ON THE DEPARTMENT'S EROSION CONTROL PRODUCT ACCEPTABILITY LIST MAY BE SUBSTITUTED.

WHEN REMOVING OR MAINTAINING INLET PROTECTION, CARE SHALL BE TAKEN SO THAT THE SEDIMENT TRAPPED ON THE GEOTEXTILE FABRIC DOES NOT FALL INTO THE INLET. ANY MATERIAL FALLING INTO THE INLET SHALL BE REMOVED IMMEDIATELY.

① *FINISHED SIZE, INCLUDING FLAP POCKETS WHERE REQUIRED, SHALL EXTEND A MINIMUM OF 10" AROUND THE PERIMETER TO FACILITATE MAINTENANCE OR REMOVAL.*

② *FLAP POCKETS SHALL BE LARGE ENOUGH TO ACCEPT WOOD 2X4.*

INSTALLATION NOTES

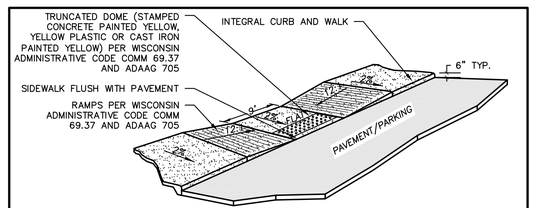
DO NOT INSTALL INLET PROTECTION TYPE D IN INLETS SHALLOWER THAN 30", MEASURED FROM THE BOTTOM OF THE INLET TO THE TOP OF THE GRATE.

TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE.

THE INSTALLED BAG SHALL HAVE A MINIMUM SIDE CLEARANCE, BETWEEN THE INLET WALLS AND THE BAG, MEASURED AT THE BOTTOM OF THE OVERFLOW HOLES, OF 3". WHERE NECESSARY THE CONTRACTOR SHALL CINCH THE BAG, USING PLASTIC ZIP TIES, TO ACHIEVE THE 3" CLEARANCE. THE TIES SHALL BE PLACED AT A MAXIMUM OF 4" FROM THE BOTTOM OF THE BAG.

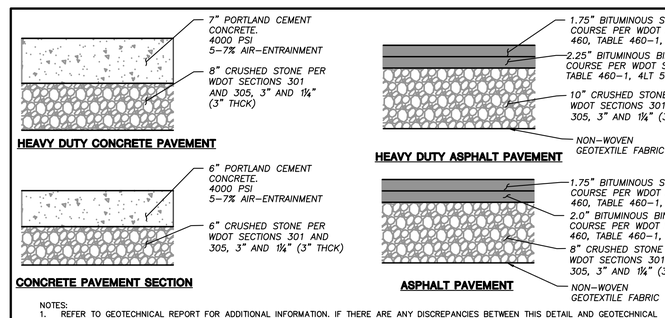
INLET PROTECTION, TYPE D

N.T.S.



ACCESSIBLE SIDEWALK SECTION

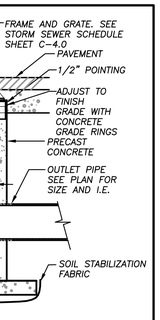
N.T.S.



NOTES:
1. REFER TO GEOTECHNICAL REPORT FOR ADDITIONAL INFORMATION. IF THERE ARE ANY DISCREPANCIES BETWEEN THIS DETAIL AND GEOTECHNICAL REPORT, THE GEOTECHNICAL REPORT SHALL GOVERN.
2. WISDOT STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION, INCLUDING SUPPLEMENTAL SPECIFICATIONS, BUT EXCLUDING LIMITATIONS IN SECTION 460.3.2 RESTRICTING LAYER THICKNESS BY AGGREGATE SIZE.
3. COMPACTION REQUIREMENTS:
   – BITUMINOUS CONCRETE: REFER TO SECTION 460–3.
   – BASE COURSE: REFER TO SECTION 301.3.4.2, STANDARD COMPACTION
4. CONCRETE PADS SHALL HAVE A WIRE REINFORCEMENT MESH (W6X6, 2.9X2.9) FOR CRACK CONTROL.
5. AGGREGATE BASE SHALL BE 3" MINUS UP TO 3 " BELOW PAVEMENT AND 1¼" MINUS TO PAVEMENT.

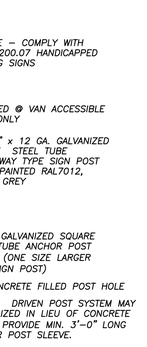
PAVEMENT SECTIONS

N.T.S.



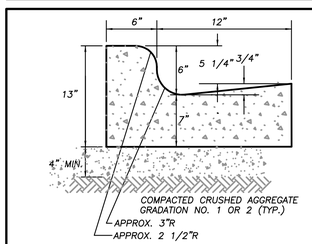
CURB INLET

N.T.S.



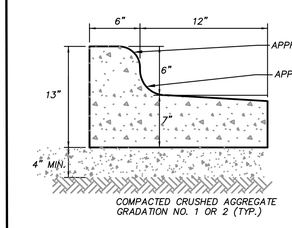
ADA PARKING STALL SIGN

N.T.S.



18" STANDARD CURB AND GUTTER

N.T.S.



18" REJECT CURB AND GUTTER

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CLIENT:
SUMMIT CREDIT UNION

CLIENT ADDRESS:
4800 American Parkway
MADISON, WI 53718

PROJECT:
SUMMIT CREDIT UNION - WAUKESHA BRANCH

PROJECT LOCATION:
2208 E MORELAND BOULEVARD
WAUKESHA COUNTY

PLAN MODIFICATIONS:

#	Date:	Description:
1	04.09.18	CITY PLAN REVIEW
2	05.14.18	CITY RESUBMITTAL
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Design/Drawn:
Approved:

SHEET TITLE:
DETAILS

SHEET NUMBER:
C5.0

JSD PROJECT NO: 18-8469

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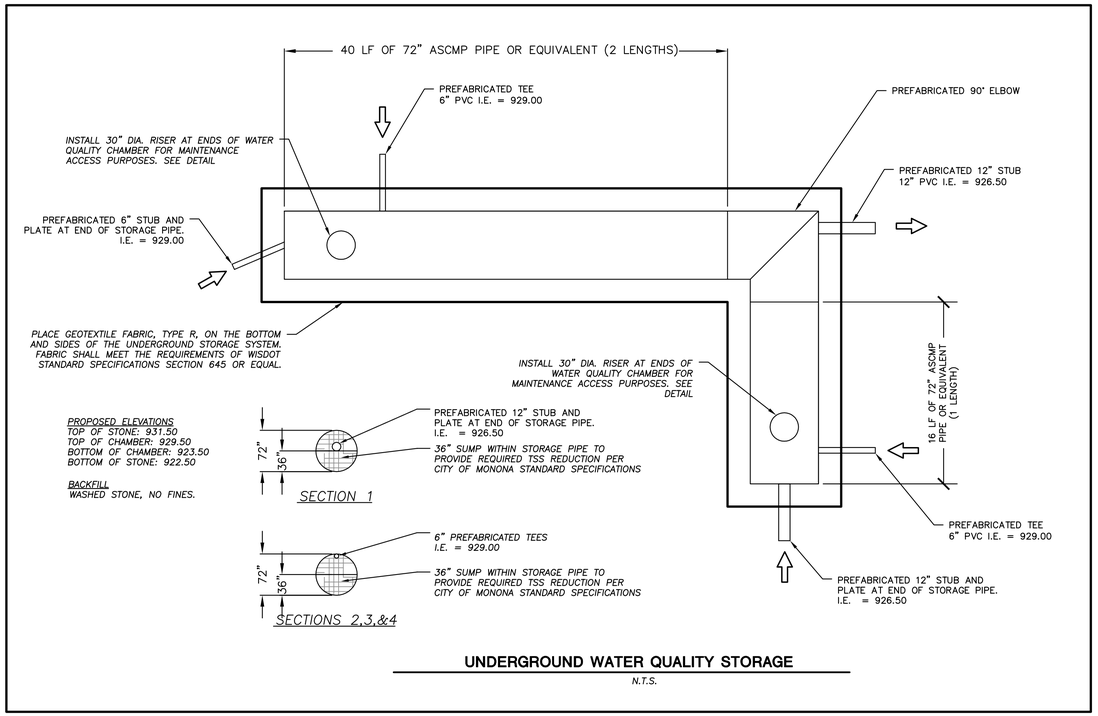
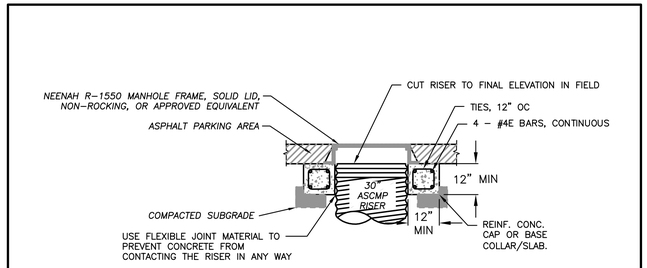


UNDERGROUND WATER QUALITY STORAGE

N.T.S.



WATER QUALITY STORAGE RISER SECTION

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Design/Drawn:
Approved:

SHEET TITLE:
DETAILS

SHEET NUMBER:
C5.1

JSD PROJECT NO: 18-8469

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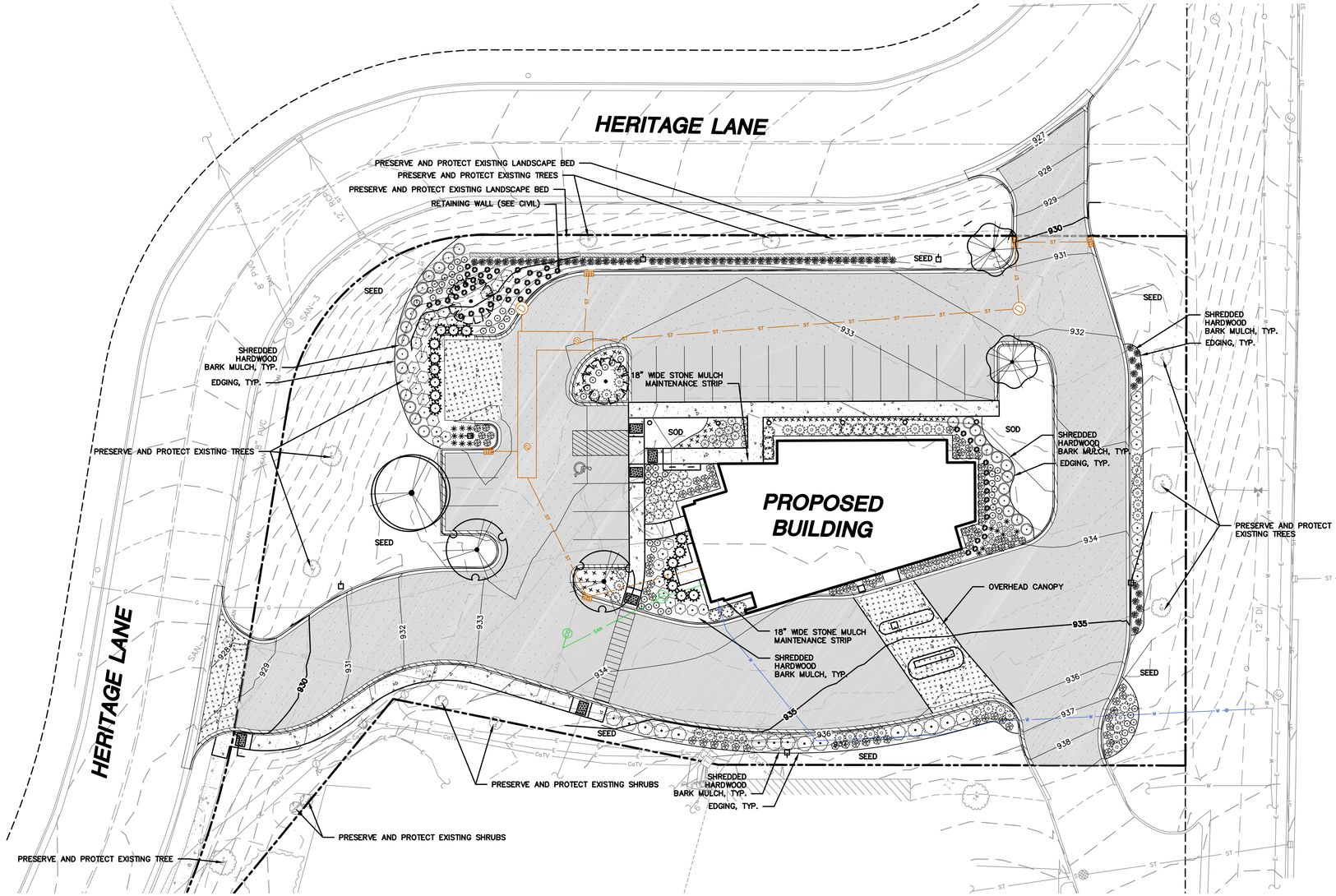
PLANT SCHEDULE

Ø1–DECIDUOUS TREES	QTY	BOTANICAL NAME	COMMON NAME	CONT	SIZE
	2	Acer rubrum 'October Glory' TM	October Glory Maple	B & B	2.5"Cal
	2	Amelanchier x grandiflora 'Autumn Brilliance'	Autumn Brilliance Serviceberry	B & B	1.5"Cal
	2	Malus x 'Spring Snow'	Spring Snow Crab Apple	B & B	1.5"Cal
	1	Tilia cordata 'Greenspire'	Greenspire Littleleaf Linden	B & B	2.5"Cal
Ø2–EVERGREEN TREES	QTY	BOTANICAL NAME	COMMON NAME	CONT	SIZE
	16	Thuja occidentalis 'Holmstrup'	Holmstrup Arborvitae	B & B	Min. 6' Ht.

PLANT SCHEDULE

Ø3–DECIDUOUS SHRUBS	QTY	BOTANICAL NAME	COMMON NAME	CONT	SIZE
	22	Cornus stolonifera 'Farrow'	Arctic Fire Redtwig Dogwood	3 gal	18– 24" Ht.
	7	Genista tinctoria	Golden Template Woadwaxen	2 gal	18–12" Ht.
	16	Physocarpus opulifolius 'Dart's Gold'	Yellow Ninebark	3 gal	18– 24" Ht.
	16	Spiraea fritschiana	Korean Spirea	2 gal	18–12" Ht.
	12	Viburnum dentatum 'Rastzam'	Raspberry Tart Viburnum	3 gal	18– 24" Ht.
	17	Viburnum opulus 'Compactum'	Compact European Cranberrybush	3 gal	18– 24" Ht.
Ø4–EVERGREEN SHRUBS	QTY	BOTANICAL NAME	COMMON NAME	CONT	SIZE
	28	Juniperus horizontalis 'Bar Harbor'	Bar Harbor Juniper	3 gal	18–12" Ht.
	11	Microbiota decussata 'Condrew'	Drew's Blue Siberian Carpet Cypress	3 gal	6" Ht.
	42	Thuja occidentalis 'Hetz Midget'	Hetz Midget Arborvitae	3 gal	18– 24" Ht.

Ø5–ORNAMENTAL GRASSES	QTY	BOTANICAL NAME	COMMON NAME	CONT	SIZE
	68	Calamagrostis brachytricha	Reed Grass	1 gal	18– 24" Ht.
	67	Deschampsia cespitosa 'Goldtau'	Gold Dew Tufted Hair Grass	4"pot	18–12" Ht.
	52	Panicum virgatum 'Heavy Metal'	Heavy Metal Switch Grass	1 gal	18– 24" Ht.
	77	Panicum virgatum 'Northwind'	Northwind Switch Grass	1 gal	18– 24" Ht.
	14	Sporobolus heterolepis	Prairie Dropseed	1 gal	18–12" Ht.
Ø6–PERENNIALS	QTY	BOTANICAL NAME	COMMON NAME	CONT	SIZE
	5	Astilbe x arendsii 'Bridal Veil'	Bridal Veil Astilbe	1 gal	18–12" Ht.
	9	Echinacea purpurea 'White Swan'	White Swan Coneflower	1 gal	18–12" Ht.
	16	Enchinacea purpurea 'Ruby Star'	Ruby Star Coneflower	1 gal	18–12" Ht.
	66	Hemerocallis x 'Stella de Oro'	Stella de Oro Daylily	4"pot	18–12" Ht.



LEGEND (PROPOSED)

- PROPERTY LINE
- SETBACK LINE
- EASEMENT LINE
- BUILDING LINE
- BUILDING OVERHANG LINE
- EDGE OF CONCRETE
- STANDARD CURB AND GUTTER
- REJECT CURB AND GUTTER
- PROPOSED CONCRETE PAVEMENT
- PROPOSED HEAVY DUTY CONCRETE PAVEMENT
- PROPOSED ASPHALT PAVEMENT
- PROPOSED HEAVY DUTY ASPHALT PAVEMENT
- LIGHT POLE
- BOLLARD

GENERAL NOTES:

1. REFER TO THE EXISTING CONDITIONS SURVEY FOR EXISTING CONDITIONS NOTES AND LEGEND.
2. ALL WORK IN THE ROW SHALL BE IN ACCORDANCE WITH THE CITY OF WAUKESHA STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION.
3. JSD SHALL BE HELD HARMLESS AND DOES NOT WARRANT ANY DEVIATIONS BY THE OWNER/CONTRACTOR FROM THE APPROVED CONSTRUCTION PLANS THAT MAY RESULT IN DISCIPLINARY ACTIONS BY ANY OR ALL REGULATORY AGENCIES.
4. DRAWNG FOR REVIEW – NOT FOR CONSTRUCTION UNLESS OTHERWISE NOTED IN THE TITLE BLOCK.
5. THE LANDSCAPE CONTRACTOR SHALL COORDINATE ALL FINE GRADING AND TOPSOILING WITH GENERAL CONTRACTOR
6. REFER TO SHEET L2.0 FOR ADDITIONAL DETAILS, NOTES AND SPECIFICATION INFORMATION INCLUDING MATERIALS, GUARANTEE AND EXECUTION RELATED TO LANDSCAPE PLAN

north

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Design/Drawn: ABK
Approved: MAS

SHEET TITLE:
LANDSCAPE PLAN

SHEET NUMBER:
L1.0

JSD PROJECT NO: 18-8469

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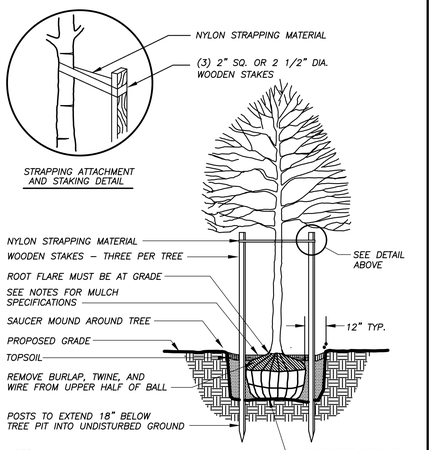
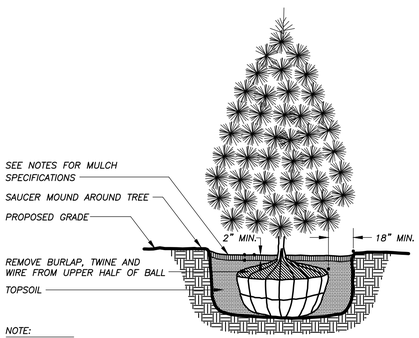


NOTE:
1. ROOT FLARE TO BE EXPOSED.
2. DIG HOLE NO DEEPER THAN BASE OF ROOT BALL TO FLARE.
3. ROOT BALL TO BE SET ON UNDISTURBED GROUND.

DECIDUOUS TREE PLANTING DETAIL

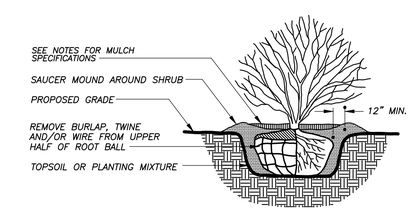
N.T.S.



NOTE:
1. ROOT FLARE TO BE AT GRADE.
2. DIG HOLE NO DEEPER THAN BASE OF ROOT BALL TO FLARE.

EVERGREEN TREE PLANTING DETAIL

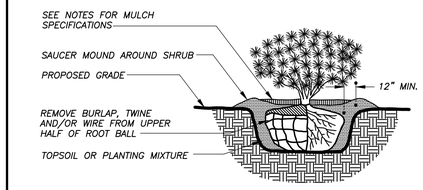
N.T.S.



NOTE:
1. ROOT FLARE TO BE EXPOSED.
2. DIG HOLE NO DEEPER THAN BASE OF ROOT BALL TO FLARE.

DECIDUOUS SHRUB PLANTING DETAIL

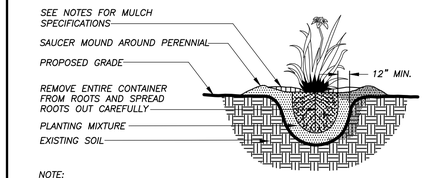
N.T.S.



NOTE:
1. ROOT FLARE TO BE EXPOSED.
2. DIG HOLE NO DEEPER THAN BASE OF ROOT BALL TO FLARE.

EVERGREEN SHRUB PLANTING DETAIL

N.T.S.



NOTE:
1. ROOT FLARE TO BE EXPOSED

PERENNIAL/ORNAMENTAL GRASS PLANTING DETAIL

N.T.S.

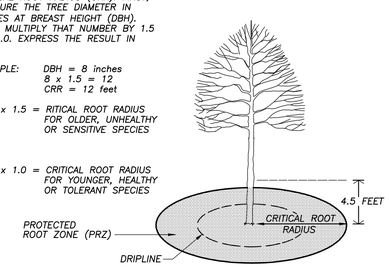
APPROXIMATE A TREE'S PROTECTED ROOT ZONE BY CALCULATING THE CRITICAL ROOT RADIUS (CRR). FIRST, MEASURE THE TREE DIAMETER IN INCHES AT BREAST HEIGHT (DBH). THEN MULTIPLY THAT NUMBER BY 1.5 OR 1.0. EXPRESS THE RESULT IN FEET.

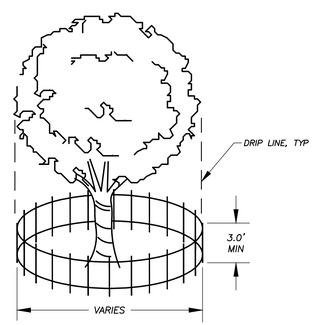
EXAMPLE: DBH = 8 inches
8 x 1.5 = 12
CRR = 12 feet

DBH x 1.5 = RITICAL ROOT RADIUS FOR OLDER, UNHEALTHY OR SENSITIVE SPECIES

OR

DBH x 1.0 = CRITICAL ROOT RADIUS FOR YOUNGER, HEALTHY OR TOLERANT SPECIES

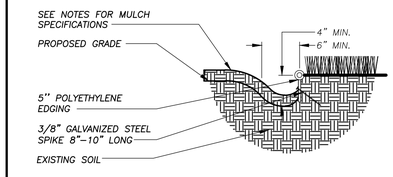




TREE NOTES:
1. CONTRACTOR SHALL INSTALL TREE PROTECTION FENCING IN THE AREA SURROUNDING THE TREE WITHIN THE CRITICAL ROOT RADIUS
2. NO EXCAVATION IS PERMITTED WITHIN THE CRITICAL ROOT RADIUS
3. IF EXCAVATION WITHIN THE CRITICAL ROOT RADIUS OF ANY TREE IS NECESSARY, CONTRACTOR SHALL CONTACT CITY FORESTER PRIOR TO EXCAVATION TO ASSESS THE IMPACT TO THE TREE AND ROOT SYSTEM.

TREE PROTECTION DETAIL

N.T.S.



LANDSCAPE EDGING DETAIL

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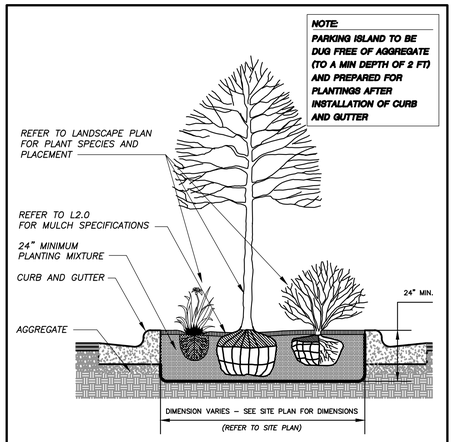


TYPICAL PARKING ISLAND DETAIL

N.T.S.

GENERAL NOTES

1. GENERAL: ALL WORK IN THE R-O-W AND PUBLIC EASEMENTS SHALL BE IN ACCORDANCE WITH LOCAL MUNICIPAL REQUIREMENTS. JSD SHALL BE HELD HARMLESS AND DOES NOT WARRANT ANY DEVIATIONS BY THE OWNER/CONTRACTOR FROM THE APPROVED CONSTRUCTION PLANS THAT MAY RESULT IN DISCIPLINARY ACTIONS BY ANY OR ALL REGULATORY AGENCIES. LOCATE ALL UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR REPAIRING ANY DAMAGE DONE TO UTILITIES. CONTRACTOR MUST CALL 1-800-382-5544 FOR UTILITY LOCATIONS AT LEAST THREE DAYS PRIOR TO DIGGING. HAND DIG AND INSTALL ALL PLANTS THAT ARE NEAR EXISTING UTILITIES. PROTECT PREVIOUSLY INSTALLED WORK OF OTHER TRADES. CONTRACTOR IS RESPONSIBLE FOR STAKING THE PLANT MATERIALS FOR REVIEW BY OWNER PRIOR TO DIGGING AND PLACEMENT AND SHALL COORDINATE ALL FINE GRADING AND RESTORATION WITH THE GRADING CONTRACTOR.

2. DELIVERY AND HANDLING: DO NOT DELIVER MORE PLANT MATERIALS THAN CAN BE PLANTED IN ONE DAY, UNLESS ADEQUATE, APPROPRIATE AND SECURE STORAGE IS PROVIDED AND APPROVED BY OWNER'S REPRESENTATIVE. AT ALL TIMES, PROTECT ALL PLANT MATERIALS FROM WIND AND DIRECT SUN. DELIVER PLANTS WITH LEGIBLE IDENTIFICATION LABELS. PROTECT PLANTS DURING DELIVERY AND DO NOT PRUNE PRIOR TO DELIVERY. ALL TREES AND SHRUBS SHALL BE PLANTED ON THE DAY OF DELIVERY; IF THIS IS NOT POSSIBLE, PROTECT THE PLANT MATERIALS NOT PLANTED BY STORING THEM IN A SHADED, SECURE AREA, PROTECTING THE ROOT MASS WITH WET SOIL, MULCH, HAY OR OTHER SUITABLE MEDIUM. CONTRACTOR TO KEEP ALL PLANT MATERIALS ADEQUATELY WATERED TO PREVENT ROOT DESICCATION. DO NOT REMOVE CONTAINER GROWN STOCK FROM CONTAINERS BEFORE TIME OF PLANTING. DO NOT PICK UP CONTAINER OR BALLED PLANTS BY STEM OR ROOTS. ALL PLANTS SHALL BE LIFTED AND HANDLED FROM THE BOTTOM OF THE CONTAINER OR BALL. PERFORM ACTUAL PLANTING ONLY WHEN WEATHER AND SOIL CONDITIONS ARE SUITABLE IN ACCORDANCE WITH LOCALLY ACCEPTED BEST HORTICULTURAL PRACTICES.

3. MATERIALS – PLANTS: ALL PLANTS SHALL CONFORM TO THE AMERICAN STANDARD FOR NURSERY STOCK ANSI Z60.1-2004. PLANTS SHALL BE TRUE TO SPECIES AND VARIETY SPECIFIED AND NURSERY GROWN IN ACCORDANCE WITH GOOD HORTICULTURAL PRACTICES UNDER CLIMATIC CONDITIONS SIMILAR TO THOSE IN THE LOCALITY OF THE PROJECT FOR AT LEAST 2 YEARS. PLANTS SHALL BE FRESHLY DUG (DURING THE MOST RECENT FAVORABLE HARVEST SEASON). PLANTS SHALL BE SO TRAINED IN DEVELOPMENT AND APPEARANCE AS TO BE UNQUESTIONABLY SUPERIOR IN FORM, COMPACTNESS, AND SYMMETRY. PLANTS SHALL BE SOUND, HEALTHY, VIGOROUS, WELL BRANCHED AND DENSELY FOLIATED WHEN IN LEAF, AND FREE OF DISEASE AND INSECTS (ADULT EGGS, PUPAE OR LARVAE). THEY SHALL HAVE HEALTHY, WELL-DEVELOPED ROOT SYSTEMS AND SHALL BE FREE FROM PHYSICAL DAMAGE OR OTHER CONDITIONS THAT WOULD PREVENT THRIVING GROWTH. PLANTS SHALL BE OF THE HIGHEST QUALITY, POSSESS TYPICAL GROWTH HABITS AND FORM FOR THEIR SPECIES AND BE FREE OF INJURY. PARKWAY TREES AND PARKING LOT TREES SHALL HAVE A MINIMUM BRANCHING HEIGHT OF SIX (6) FEET ABOVE THE GROUND TO ALLOW ADEQUATE VISUAL AND PHYSICAL CLEARANCE.

4. PRUNING: THE CONTRACTOR SHALL PRUNE ALL TREES AND REPAIR ANY INJURIES THAT OCCURRED DURING THE PLANTING PROCESS. DOUBLE LEADERS, DEAD BRANCHES, AND LIMBS DAMAGED OR BROKEN DURING THE PLANTING PROCESS SHALL BE PRUNED. THIS SHALL BE THE ONLY PRUNING ALLOWED AT PLANTING. PRUNING SHALL CONFORM TO AMERICAN STANDARD FOR TREE CARE OPERATIONS, ANSI A300. PRUNE TREES IN ACCORDANCE WITH NAA GUIDELINES. DO NOT TOP TREES. PRUNE SHRUBS ACCORDING TO STANDARD HORTICULTURAL PRACTICES. ON CUTS OVER 3/4" IN DIAMETER AND BRUISES OR SCARS ON BARK, TRACE THE INJURED CAMBIUM LAYER BACK TO LIVING TISSUE AND REMOVE. SMOOTH AND SHAPE WOUNDS SO AS NOT TO RETAIN WATER. TREAT THE AREA WITH AN APPROVED INCONSPICUOUS LATEX BASED ANTISEPTIC TREE PAINT, IF PRUNING OCCURS "IN SEASON". DO NOT PRUNE ANY OAK TREES DURING THE MONTHS FROM APRIL TO OCTOBER.

5. CLEANUP: DISPOSED OF EXCESS SOIL. REMOVE ALL CUTTINGS AND WASTE MATERIALS. SOIL, BRANCHES, BINDING AND WRAPPING MATERIALS, REJECTED PLANTS, OR OTHER DEBRIS RESULTING FROM ANY PLANTING SHALL BE PROMPTLY CLEANED UP AND REMOVED. THE WORK AREA SHALL BE KEPT SAFE AND NEAT AT ALL TIMES. UNDER NO CONDITION SHALL THE ACCUMULATION OF SOIL, BRANCHES OR OTHER DEBRIS BE ALLOWED UPON A PUBLIC PROPERTY IN SUCH A MANNER AS TO RESULT IN A PUBLIC SAFETY HAZARD. LIKEWISE, UNDER NO CIRCUMSTANCES SHALL ANY DEBRIS OR INCIDENTAL MATERIALS BE ALLOWED UPON ADJACENT PRIVATE PROPERTY.

LANDSCAPE MATERIAL NOTES

1. MATERIALS – SOIL: PLANTING SOIL SHALL MEET THESE REQUIREMENTS:
   A. PLANTING AREAS = 24"
   B. TREE PITS = SEE DETAILS

2. PLANTING SOIL TO BE A MINIMUM 24" DEPTH, UNLESS OTHERWISE SPECIFIED AS ABOVE OR ON DETAILS. TOPSOIL TO BE CLEAN, FRIABLE LOAM FROM A LOCAL SOURCE, FREE FROM STONES OR DEBRIS OVER 3/4" IN DIAMETER, AND FREE FROM TOXINS. TOPSOIL SHALL HAVE A pH VALUE BETWEEN 6 AND 7. TOPSOIL AND PLANTING SOIL SHALL BE TESTED TO CONFORM TO THESE SPECIFICATIONS AND SHALL BE AMENDED TO MEET THESE SPECIFICATIONS. PROVIDE TEST RESULTS TO OWNER'S REPRESENTATIVE PRIOR TO PLACEMENTDO NOT PLACE FROZEN OR MUDDY TOPSOIL. APPLY SOIL AMENDMENTS TO ALL LANDSCAPE AREAS PER SOIL TEST.

3. MATERIALS – SHREDDED HARDWOOD BARK MULCH: ALL PLANTING AREAS LABELED ON PLAN SHALL RECEIVE CERTIFIED WEED FREE SHREDDED HARDWOOD BARK MULCH OVER ALL PLANTING AREAS. SHREDDED HARDWOOD BARK MULCH SIZE & COLOR TO BE APPROVED BY OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION. FERTILIZER SHALL BE IN ACCORDANCE WITH APPLICABLE LOCAL, COUNTY AND STATE OF WISCONSIN REQUIREMENTS. SHREDDED HARDWOOD BARK MULCH AREAS SHALL NOT RECEIVE WOVEN WEED BARRIER FABRIC.

4. MATERIALS – STONE MULCH: ALL PLANTING AREAS LABELED ON PLAN SHALL RECEIVE DECORATIVE STONE MULCH SPREAD TO A CONSISTENT DEPTH OF THREE INCHES OVER ENTIRE PLANTING AREA. DECORATIVE STONE MULCH TYPE, SIZE & COLOR TO BE APPROVED BY OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION. FERTILIZER SHALL BE IN ACCORDANCE WITH APPLICABLE LOCAL, COUNTY AND STATE OF WISCONSIN REQUIREMENTS. STONE MULCH AREAS SHALL RECEIVE WOVEN WEED BARRIER FABRIC.

5. MATERIALS – TREE & SHRUB RINGS: ALL TREES AND/OR SHRUBS PLANTED IN SEEDED LAWN AREAS TO BE INSTALLED WITH A MINIMUM 5' DIAMETER SHREDDED HARDWOOD BARK MULCH TREE RING SPREAD TO A CONSISTENT DEPTH OF 4 INCHES. ALL TREE RINGS SHOULD BE INSTALLED WITH A 5" DEPTH SHOVEL CUT EDGE, ANGLED 45 DEGREES INTO SOIL AT A 5' DIAMETER ABOUT THE CENTER OF THE TREE PLANTING. A PRE-EMERGENT GRANULAR HERBICIDE WEED-PREVENTER SHOULD BE MIXED WITH MULCH USED TO INSTALL TREE RING AS WELL AS TOPICALLY APPLIED TO FINISHED INSTALLATION OF TREE RING.

6. MATERIALS – WEED BARRIER FABRIC: ALL DECORATIVE STONE MULCH PLANTING AREAS SHALL BE INSTALLED WITH WOVEN WEED BARRIER FABRIC. NO PLASTIC/IMPERVIOUS BARRIERS WILL BE PERMITTED. EXAMPLE: BLACK VISQUEEN. SHREDDED HARDWOOD BARK MULCH AREAS SHALL NOT RECEIVE WOVEN WEED BARRIER FABRIC.

7. MATERIALS – EDGING: EDGING SHALL BE 5" DEEP, POLYETHYLENE EDGING. OWNER'S REPRESENTATIVE SHALL APPROVE PRODUCT SPECIFICATION PROVIDED BY LANDSCAPE CONTRACTOR.

8. MATERIALS – SEED: DISTURBED LAWN AREAS LABELED ON PLAN AS SUCH, SHALL BE SPREAD BY HAND BROADCAST METHOD OR APPROPRIATE SPREADER EQUIPMENT WITH EARTH CARPET'S 'MADISON PARKS' OR EQUIVALENT AS APPROVED BY THE OWNER'S REPRESENTATIVE, INSTALLED PER MANUFACTURER'S RECOMMENDATIONS. IN ADDITION TO LAWN SEED, ANNUAL RYE SHALL BE APPLIED TO ALL DISTURBED AREAS AT A RATE OF 1 1/2 LBS PER 1000 SQUARE FEET. FERTILIZE AND MULCH PER MANUFACTURER'S RECOMMENDATIONS.

9. MATERIALS – SOD: ALL AREAS SPECIFIED ON PLAN PER THESE NOTES: TURFGRASS SOD: CLASS OF TURFGRASS SOD SHALL BE PREMIUM GRADE APPROVED TURFGRASS SOD. ONLY IMPROVED TYPES OF SOD (ELITE) ARE ACCEPTABLE. TURFGRASS SHALL BE MACHINE CUT AT A UNIFORM THICKNESS OF .60 INCH, PLUS OR MINUS .25 INCH, AT TIME OF CUTTING. MEASUREMENT FOR THICKNESS SHALL EXCLUDE TOP GROWTH AND THATCH. LARGE ROLL TURFGRASS SOD SHALL BE CUT TO THE SUPPLIER'S STANDARD WIDTH (36-48 INCHES) AND LENGTH. BROKEN PADS AND TORN OR UNEVEN ENDS WILL NOT BE ACCEPTABLE. STANDARD SIZE SECTIONS OF TURGRASS SOD SHALL BE STRONG ENOUGH SO THAT THEY CAN BE PICKED UP AND HANDLED WITHOUT DAMAGE. TURFGRASS SOD SHALL NOT BE HARVESTED OR TRANSPLANTED WHEN MOISTURE CONTENT IS EXCESSIVELY DRY OR WET, AS THIS MAY ADVERSELY AFFECT ITS SURVIVAL. POST-PLANT IRRIGATION WILL BE NECESSARY TO ENSURE SOD STAYS ALIVE AND ROOTS INTO SOIL. THE CONTRACTOR IS RESPONSIBLE FOR WATERING SOD UNTIL TIME OF ACCEPTANCE BY THE OWNER. TURFGRASS SOD SHALL BE HARVESTED, DELIVERED, AND INSTALLED/TRANSPLANTED WITH A PERIOD OF 24 HOURS. TURGRASS SOD SHALL BE RELATIVELY FREE OF THATCH, UP TO .5 INCH ALLOWABLE (UNCOMPRESSED). TURFGRASS SOD SHALL BE REASONABLY FREE (10 WEEDS/100 SQ. FT.) OF DISEASES, NEMATODES AND SOIL-BORNE INSECTS. ALL TURFGRASS SOD SHALL BE FREE OF GRASSY AND BROAD LEAF WEEDS. THE SOD SUPPLIER SHALL MAKE RECOMMENDATIONS TO THE CONTRACTOR REGARDING WATERING SCHEDULE. THE WATERING SCHEDULE SHOULD BEGIN IMMEDIATELY AFTER SOD IS INSTALLED.

10. MATERIALS – IRRIGATION: DRIP IRRIGATION TO BE INSTALLED SURROUNDING FOUNDATION. SEE PLUMBING DRAWINGS AND SPECIFICATIONS.

11. MATERIALS – IRRIGATION:
    11.1. BASE BID: TEMPORARY DRIP IRRIGATION (DARK BROWN IN COLOR) TO BE INSTALLED IN ALL PLANT BEDS SURROUNDING THE BUILDING.
    11.2. ALTERNATE BID: PERMANENT IN-GROUND IRRIGATION SYSTEM TO BE INSTALLED WITH COVERAGE AREA TO INCLUDE ALL PERIMETER PLANT BEDS, PARKING LOT ISLANDS AND TURFGRASS AREAS.

CONTRACTOR AND OWNER RESPONSIBILITY NOTES

1. **GUARANTEE: THE CONTRACTOR SHALL GUARANTEE ALL PLANTS THROUGH ONE (1) YEAR AFTER ACCEPTANCE BY THE OWNER'S REPRESENTATIVE. PLANTS SHALL BE ALIVE AND IN HEALTHY AND FLOURISHING CONDITION AT THE END OF THE GUARANTEE PERIOD. THE CONTRACTOR SHALL REPLACE (AT NO COST TO OWNER) ANY PLANTS THAT ARE DEAD OR NOT IN A VIGOROUS THRIVING CONDITION. REPLACEMENT PLANTS SHALL BE OF THE SAME KIND AND SIZE AS ORIGINALLY SPECIFIED UNLESS OTHERWISE DIRECTED BY OWNER'S REPRESENTATIVE. RESTORE BEDS AS NECESSARY FOLLOWING PLANT REPLACEMENT, INCLUDING BUT NOT LIMITED TO BEDDING, EDGING, MULCH, ETC. REPLACE PLANTS DAMAGED AT TIME OF PLANTING. REPAIR AREAS DISTURBED IN ANY WAY DURING PLANT REPLACEMENT AT NO COST TO OWNER. CONTRACTOR SHALL PROVIDE A TWO (2)-YEAR STRAIGHTENING GUARANTEE FOR ALL TREES.**

2. **CONTRACTOR IS RESPONSIBLE FOR STAKING THE PLANT MATERIALS FOR REVIEW BY OWNER'S REPRESENTATIVE PRIOR TO DIGGING AND PLACEMENT AND SHALL COORDINATE ALL FINE GRADING AND RESTORATION WITH THE GRADING CONTRACTOR.**

3. **MAINTENANCE: (CONTRACTOR) FOR ALL PLANTINGS, SEEDED AREAS AND SODDED LAWN AREAS: THE CONTRACTOR SHALL MAINTAIN ALL PLANTINGS AND LAWN AREAS FOR A MINIMUM TIME PERIOD OF 60 DAYS, UNTIL FINAL ACCEPTANCE BY OWNER'S REPRESENTATIVE. THE CONTRACTOR IS RESPONSIBLE FOR ADEQUATELY WATERING PLANTS AND LAWN/TURFGRASS DURING THIS 60 DAY ESTABLISHMENT PERIOD. CONTRACTOR IS RESPONSIBLE FOR THE ESTABLISHMENT OF HEALTHY VIGOROUS PLANT MATERIALS AND LAWN/TURFGRASS GROWTH. CONTRACTOR IS ALSO RESPONSIBLE FOR ANY PRUNING OF PLANT MATERIALS, AND SHAPING AND/OR REPLACEMENT OR SUPPLEMENT OF DEFICIENT SHREDDED HARDWOOD BARK MULCH DURING THIS PERIOD. LONG TERM PLANT MATERIALS AND LAWN/TURFGRASS MAINTENANCE AND ANY PROGRAM FOR SUCH IS THE RESPONSIBILITY OF THE OWNER. ALL PLANTINGS AND LAWN/TURFGRASS AREAS SHALL BE MAINTAINED IN A MANICURED CONDITION UNTIL THE TIME WHEN THE OWNER'S ACCEPTANCE IS GIVEN.**

4. **MAINTENANCE: (OWNER) THE OWNER IS RESPONSIBLE FOR THE CONTINUED MAINTENANCE, REPAIR AND REPLACEMENT OF ALL LANDSCAPING MATERIALS AND WEED BARRIER FABRIC AS NECESSARY FOLLOWING THE ONE (1) YEAR CONTRACTOR GUARANTEE PERIOD.**

DIGGERS HOTLINE
Toll Free (800) 242-8511

JSD Professional Services, Inc.
Engineers • Surveyors • Planners
CREATE THE VISION | TELL THE STORY
MADISON | MILWAUKEE
KENOSHA | APPLETON | WAUSAU
MADISON REGIONAL OFFICE
161 HORIZON DRIVE, SUITE 101
VERONA, WISCONSIN 53593
P. 608.848.5060

CLIENT:
SUMMIT CREDIT UNION

CLIENT ADDRESS:
4800 American Parkway
MADISON, WI 53718

PROJECT:
SUMMIT CREDIT UNION - WAUKESHA BRANCH

PROJECT LOCATION:
2208 E MORELAND BOULEVARD
WAUKESHA COUNTY

PLAN MODIFICATIONS:

#	Date:	Description:
1	04.09.18	CITY PLAN REVIEW
2	05.14.18	CITY RESUBMITTAL
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		

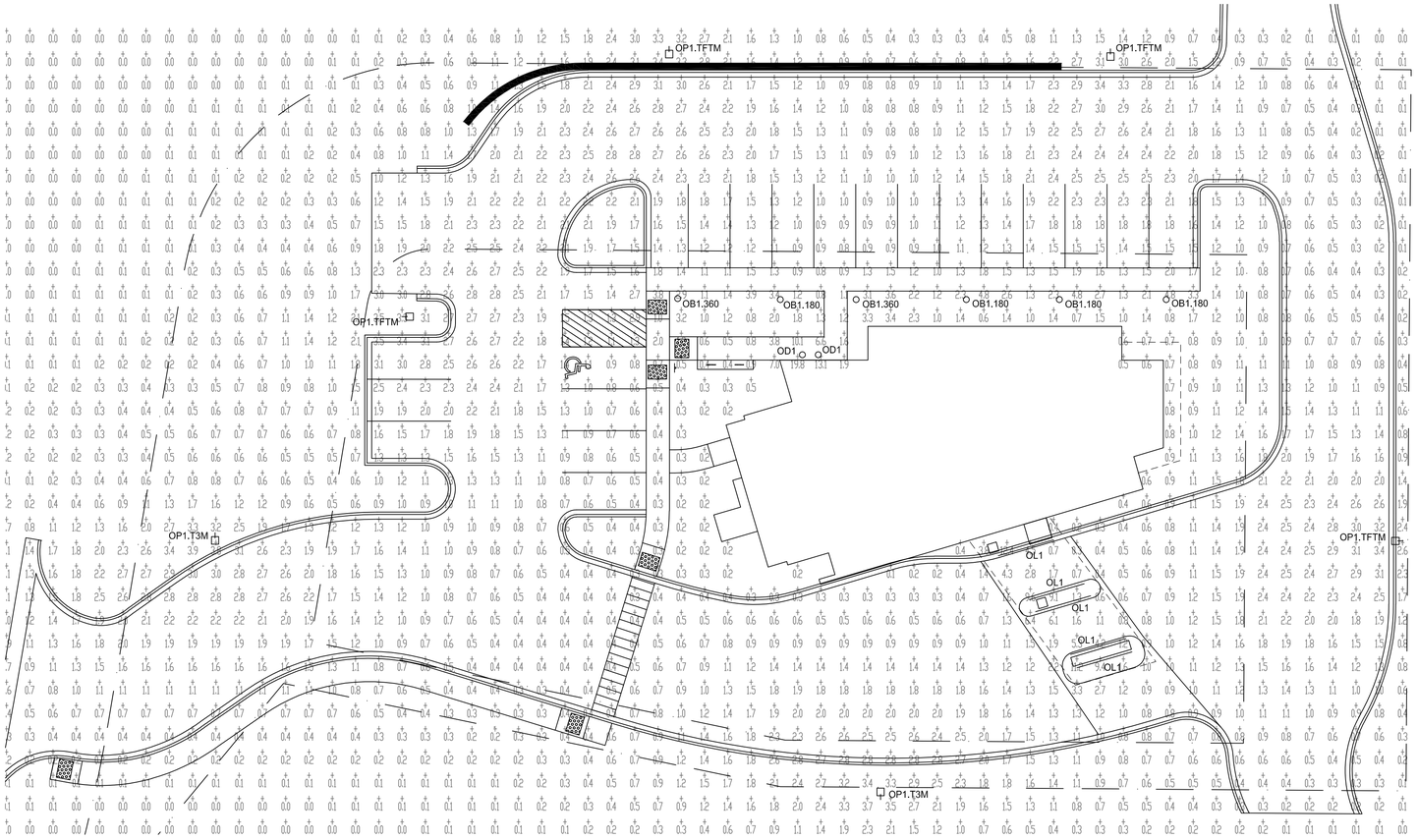
Design/Drawn: ABK
Approved: MAS

SHEET TITLE:
LANDSCAPE DETAILS, NOTES, AND SPECIFICATIONS

SHEET NUMBER:
L2.0

JSD PROJECT NO: 18-8469

File: I:\2018\188469\DWG\188469 Landscape.dwg Layout: L2.0 User: akaniewski Plotted: May 14, 2018 - 11:32am Xref's: 188469 Summit Credit Union - Waukesha



1
LC100

EXTERIOR LIGHTING CALCULATIONS

SCALE 1/16"=1'-0"

LUMINAIRE SCHEDULE		
SYMBOL	LABEL	DESCRIPTION
○	OB1.180	180 DEGREE DISTRIBUTION BOLLARD, 4000K
○	OB1.360	360 DEGREE DISTRIBUTION BOLLARD, 4000K
⊣□	OP1.TFTM	LED SITE LIGHT ON 18 FT POLE WITH A 6 INCH TALL CONCRETE BASE, 4000K
⊣□	OP1.T3M	LED SITE LIGHT ON 18 FT POLE WITH A 6 INCH TALL CONCRETE BASE, 4000K
———	OL1	LINEAR AIMABLE UP-LIGHT MOUNTED IN STRUCTURE OF CANOPY, 4000K
○	OD1	EXTERIOR DOWNLIGHT, 4000K

SCHEMATIC DESIGN SET | NOT FOR CONSTRUCTION |

REVISIONS					
NO.	DESCRIPTION	DATE			

STRANG
ARCHITECTURE | ENGINEERING | INTERIOR DESIGN
3500 MINERAL POINT ROAD | MADISON, WI 53705-4395

SCHEMATIC DESIGN SET | NOT FOR CONSTRUCTION |

PROJECT TITLE
SUMMIT BRANCH - MORELAND BLVD

2208 E. MORELAND BLVD
WAUKESHA, WI 53186

SCHEMATIC DESIGN SET | NOT FOR CONSTRUCTION |

SHEET NAME
EXTERIOR LIGHTING CALCULATIONS

PROJECT NO.	2018022	COPYRIGHT STRANG, INC. 2018	
DATE:	05-10-2018	SHEET NO.	LC100
DRAWING SET	PLAN REVIEW		

LED bollards with 180° light distribution

Type:
BEGA Product:
Project:
Voltage:
Color:
Options:
Modified:

Post construction: One piece extruded aluminum with internally welded die-cast aluminum base. Die castingas are marine grade, copper free (≤0.3% copper content) A360.0 aluminum alloy.

Enclosure: Heavy walled, die-cast aluminum cap. Clear 1/4" thick borosilicate glass with pure anodized aluminum reflector. Fully gasketed for weather tight operation using high temperature silicone gasket.

Electrical: 7.2W LED luminaire, 10 total system watts, -30°C start temperature. Integral 120V through 277V electronic LED driver, 0-10V dimming. LED module(s) are available from factory for easy replacement. Standard LED color temperature is 3000K with a >80 CRI. Available in 4000K (>80 CRI); add suffix K4 to order.**Note:** LEDs supplied with luminaire. Due to the dynamic nature of LED technology, LED luminaire data on this sheet is subject to change at the discretion of BEGA-US. For the most current technical data, please refer to www.bega-us.com.

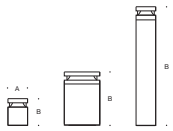
Anchor base: Heavy cast aluminum, slotted for precise alignment. Mounts to BEGA 79 824 anchorage kit. Bollard secures to base with one stainless steel set screw. The mounting system allows the luminaire to be adjusted independent of anchor bolt orientation.

Finish: All BEGA standard finishes are polyester powder coat with minimum 3 mil thickness. Available in four standard BEGA colors: Black (BLK); White (WHT); Bronze (BRZ); Silver (SLV). To specify, add appropriate suffix to catalog number. Custom colors supplied on special order.

CSA certified to U.S. and Canadian standards, suitable for wet locations. Protection class IP65

Weight: 19.0 lbs.

Luminaire Lumens: 411



LED bollards · **180°**

	Lamp	A	B	Anchorage
77753	7.2W LED	6½	39⅜	**79817**

1000 BEGA Way, Carpinteria, CA 93013 (805) 684-0533 FAX (805) 566-9474 www.bega-us.com

SUMMIT CREDIT UNION MORELAND

TYPE: OB1_180

LED Bollards with rotationally symmetrical distribution

Post construction: One piece extruded aluminum, with a one piece aluminum top housing and base, internally welded into an assembly. Die castings are marine grade, copper free (≤ 0.3% copper content) A360.0 aluminum alloy.

Enclosure: Heavy walled, die-cast aluminum cap. Clear 3/16" thick borosilicate glass with pure anodized aluminum cone reflector. Fully gasketed using high temperature silicone rubber O-ring gaskets.

Electrical: 14.4 W LED luminaire, 20 total system watts, -20° C start temperature. Integral 120 V through 277 V electronic LED driver, 0-10V, TRIAC, and ELV dimmable. LED module(s) are available from factory for easy replacement.
Standard LED color temperature is 3000K with a >80 CRI. Available in 4000K (>80 CRI); add suffix K4 to order.
Note: Due to the dynamic nature of LED technology, LED luminaire data on this sheet is subject to change at the discretion of BEGA-US. For the most current technical data, please refer to www.bega-us.com.

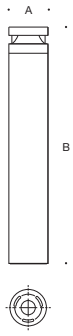
Anchor base: Heavy cast aluminum, slotted for precise alignment. Mounts to BEGA 79 817 anchorage kit (supplied).

Finish: All BEGA standard finishes are polyester powder coat with minimum 3 mil thickness. Available in four standard BEGA colors: Black (BLK); White (WHT); Bronze (BRZ); Silver (SLV). To specify, add appropriate suffix to catalog number. Custom colors supplied on special order.

UL listed for US and Canadian Standards, suitable for wet locations.
Protection class IP65.

Luminaire Lumens: 746

Type:
BEGA Product:
Project:
Voltage:
Color:
Options:
Modified:



	Lamp	A	B	Anchorage
99 570	14.4 W LED	6½	39⅜	**79 817**

1000 BEGA Way, Carpinteria, CA 93013 (805) 684-0533 FAX (805) 566-9474 www.bega-us.com

SUMMIT CREDIT UNION
MORELAND

TYPE: OB1_360

JUNO

2" IC 600 AND 1000 LUMENS LED ROUND ADJUSTABLE

2LEDTRIM G2 ADJ

Project:

Fixture Type:

Location:

Contact/Phone:

PRODUCT DESCRIPTION

2 inch aperture recessed downlight is IC rated for insulated or non-insulated applications • Luminaire produces up to 1000 lumens and is available with optical distributions approximating that of 75W MR16 halogen lamps • Low profile form factor allows luminaire to fit in 2 x 6 construction • Designed to provide 50,000 hours of life • 5 year limited warranty on LED Components.

ENVIRONMENTALLY FRIENDLY, ENERGY EFFICIENT

- No harmful ultraviolet or infrared wavelengths
- No lead or mercury, RoHS compliant
- Comparable light output up to a 75W MR16 halogen lamp

PRODUCT SPECIFICATIONS

LED Light Engine Exceptional fixture to fixture color consistency within a 3-step MacAdam ellipse • 2700K, 3000K, 3500K, and 4000K color temperatures are available with 80 CRI or 90 CRI minimum.

Modular Optics Available with field interchangeable optics in 18° Spot, 24° Narrow Flood, or 40° Flood distributions • Gimbal provides up to 35° vertical aiming and 360° horizontal aiming.

Aesthetic Trim Trim features die cast beveled knife edge trim ring for clean ceiling interface available in white, black, satin nickel, or brushed bronze • Die cast baffles are available in white, black, satin nickel, or brushed bronze

LED Driver Choice of dedicated 120 volt (120) driver or universal voltage (MVOLT) driver that accommodates input voltages from 120-277 volts AC at 50/60Hz • Power factor > 0.9 • Dedicated 120 volt driver (120) is dimmable with the use of most incandescent, magnetic low voltage and electronic low voltage dimmers • Universal voltage driver (MVOLT) is dimmable with the use of most 0-10V protocol dimmers • For a list of compatible dimmers, see JUNO2ING2-DIM.

Life Rated for 50,000 hours at 70% lumen maintenance.

Labels ENERGY STAR® Certified • 90CRI fixtures are certified to the high efficacy requirements of California T24 JA8-2016 • Meets energy code Air Leakage requirements per ASTM E283 • UL and cUL listed for damp locations.

Junction Box Includes (2) ½" knock-outs equipped with pryout slots • Push-in electrical connectors for field connections.

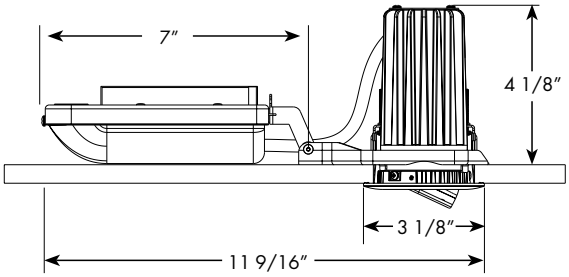
Mounting Remodel style plaster frame installs from below the ceiling and accommodates ceiling thicknesses from ½" to 1" • For thicker ceilings up to 1 ½", order 2JCTA150 • New Construction mounting frame, 2NCMF, is also available with Patented (US Patent D552,969) Real Nail 3® telescoping bar hangers to position fixture and locate wiring prior to ceiling installation • Recommend a minimum of 5.5" cavity depth to install properly • Flexible supply is recommended and non-flexible supply requires top access.

Specifications subject to change without notice.

Trim Finishes

WH BL SN BZ

DIMENSIONS



2 5/8" CEILING CUTOUT

ENGINEERING DATA (600L)

	Dedicated 120V (120)	Universal Voltage (MVOLT)	
Voltage	120	120	277
Input Power	7.5 (±5%)	7.2	7.5 (±5%)
Input Current	.06	.06	.03
Frequency	50/60Hz	50/60Hz	
Power Factor	>0.9	>0.9	>0.9

ENGINEERING DATA (1000L)

	Dedicated 120V (120)	Universal Voltage (MVOLT)	
Voltage	120	120	277
Input Power	11.5 (±5%)	10.9	11.4 (±5%)
Input Current	.10	.09	.04
Frequency	50/60Hz	50/60Hz	
Power Factor	>0.9	>0.9	>0.9

SUMMIT CREDIT UNION
MORELAND

TYPE: OD1

2" IC 600 AND 1000 LUMENS LED ROUND ADJUSTABLE
2LEDTRIM G2 ADJ

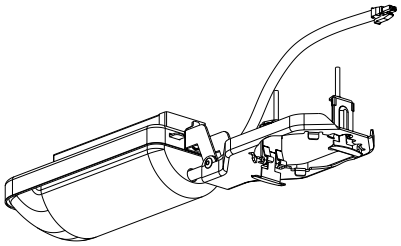
ORDERING INFORMATION DRIVER AND TRIM EACH ORDERED SEPARATELY.

DRIVER:

Example: 2LEDDRIVER G2 06LM 120 FRPC

Series		Generation		Lumens		Voltage		Driver	
2LEDDRIVER	Juno Recessed 2" Driver	**G2**	Generation 2	**06LM**	600 Nominal Lumens	**120**	120V	**FRPC**	Forward/Reverse Phase Cut
				10LM	1000 Nominal Lumens	**MVOLT**	Multi-Volt (120-277V)	**ZT**	0-10V Dimming

Note: 120V must be ordered with FRPC. MVOLT must be ordered with ZT



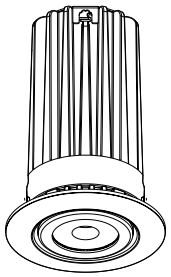
MOUNTING FRAME/DRIVER ASSEMBLY

Note: Driver assembly only intended for use with Gen2 LED trim modules. Not backward compatible with previous generation.

TRIM:

Example: 2LEDTRIM G2 ADJ 27K 80CRI FL BL

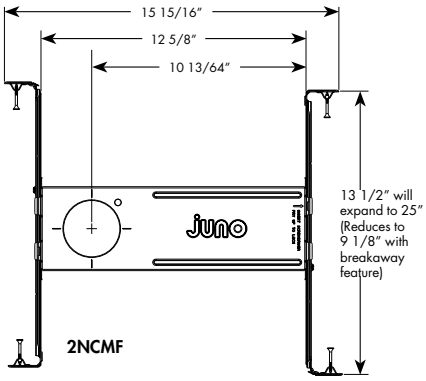
Series		Generation		Trim Designation		Color Temperature		CRI		Distribution		Trim Finish	
2LEDTRIM	Juno Recessed 2" LED Trim	**G2**	Generation 2	**ADJ**	Round Adjustable	**27K**	2700K	**80CRI**	80+ CRI	**FL**	Flood	**BL**	Black
						30K	3000K	**90CRI**	90+ CRI	**NFL**	Narrow Flood	**BZ**	Bronze
						35K	3500K			**SP**	Spot	**SN**	Satin Nickel
						40K	4000K					**WH**	White



TRIM/LED ASSEMBLY

ACCESSORIES

Catalog No.	Description
2NCMF	New Construction Mounting Frame with Real Nail® 3 bar hangers
2JCTA150	Thick Ceiling adapter for 1" - 1½" thick ceiling
LEDOPTIC2 SP	18° Spot Optic
LEDOPTIC2 NFL	24° Narrow Flood Optic
LEDOPTIC2 FL	40° Flood Optic



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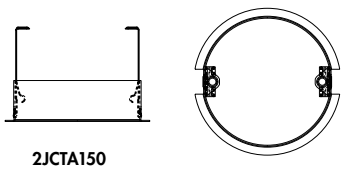

2JCTA150

SUMMIT CREDIT UNION
MORELAND

TYPE: OD1

ECOSENSE®

TRŌV®

OVERVIEW • SPECIFICATIONS • ORDERING

INTERIOR + EXTERIOR | **L50 ASYM**

DATE	PROJECT	FIRM	TYPE

THE L50 INCLUDES PATENTED OPTICAL DESIGN THAT DELIVERS THE WIDEST RANGE OF BEAM ANGLE OPTIONS FOR PRECISE COVE, WALL GRAZING, WALL WASHING OR LINE OF LIGHT APPLICATIONS. EXCLUSIVE FLIP TO FLAT™ HINGE DESIGN PROVIDES FLEXIBILITY WHEN MANAGING SMALL COVE DETAILS. TROV OFFERS SMOOTH, FLICKER FREE DIMMING DOWN TO 0%.

FEATURES :

- DIM TO 0%, ELV REVERSE PHASE
- 24 BEAM ANGLES
- MULTI-VOLT
- FLIP TO FLAT™
- 6 CCT OPTIONS
- 80+ AND 90+ CRI OPTIONS
- IP54 INTERIOR AND IP66 EXTERIOR OPTIONS

MODEL/ SIZE	INTERIOR/ EXTERIOR	LENGTH	POWER	CCT		CRI	VOLTAGE	OPTICS	
L50	I	12"	02	**WHITE CCT**	**MONO COLOR**	80	MULT	**GRAZING**	**WASHING**
	E	48"	04	22	GR****	90*	(120-277V)	9 x 9	25 x 25
			06	27	BL	Blank For Color		9 x 17	25 x 33
			08	30	AM			9 x 29	25 x 45
			10	35	RD***			9 x 59	25 x 75
			12	40				15 x 15	39 x 9
				50				15 x 23	55 x 25
								15 x 35	40 x40
								15 x 65	40 x 48
								COVE	40 x 60
								120**	40 x 90
								Asym	45 x 15
								LINE OF LIGHT	70 x 40
								LOL	70 x 70

EXAMPLE: L50-I-48-10-27-90-MULT-15x65 *90 CRi not available in 2200K or 5000K **120 is only available with Exterior option. See L35 spec sheet for interior cove options. ***Red is not available in 12W or 10W. ****Green is not available in 12W.

PERFORMANCE	WATTS	OPTIC	LUMEN OUTPUT	EFFICACY
	2W	ASYM	110 lm/LF (361 lm/m)	55 lm/W
	4W	ASYM	302 lm/LF (1037 lm/m)	76 lm/W
	6W	ASYM	482 lm/LF (1614 lm/m)	80 lm/W
	8W	ASYM	675 lm/LF (2224 lm/m)	84 lm/W
	10W	ASYM	785 lm/LF (2644 lm/m)	79 lm/W
	12W	ASYM	923 lm/LF (2752 lm/m)	77 lm/W

ALL LUMEN DATA IS FROM 4000K 80CRI FIXTURES. PLEASE SEE PHOTOMETRY SPEC SHEET FOR ADDITIONAL LUMEN DATA.

COLOR RENDERING INDEX	80+, 90+				
COLOR CONSISTENCY	2-STEP MACADAM ELLIPSE				
LUMEN DEPRECIATION / RATED LIFE	WATTS	L70 @ 25C	L70 @ 50C	L90 @ 25C	L90 @ 50C
	2W-12W	>150,000	>70,000	>50,000	>25,000

* CALCULATIONS FOR LED FIXTURES ARE BASED ON MEASUREMENTS THAT COMPLY WITH IES LM-80 TESTING PROCEDURES AND IES TM-21 CALCULATOR

ELECTRICAL

POWER CONSUMPTION

2W*/LF (6.6W/M) ; 4W/LF (13.2W/M) ; 6W/LF (19.8W/M) ; 8W/LF (26.4W/M) ; 10W/LF (33W/M) ; 12W/FL (39.6W/M)
* 3W/LF (9.9W/M) at 220V -277V

MAX FIXTURE RUN LENGTH

	2W/LF		4W/LF		6W/LF		8W/LF		10W/LF		12W/LF	
Volts	Max Run all 1'	Max Run all 4'	Max Run all 1'	Max Run all 4'	Max Run all 1'	Max Run all 4'	Max Run all 1'	Max Run all 4'	Max Run all 1'	Max Run all 4'	Max Run all 1'	Max Run all 4'
120	214	214	186	186	152	152	114	114	91	91	76	76
220	374	392	340	340	277	277	209	209	95	167	95	139
277	374	494	374	428	349	349	263	263	95	190	95	175

POWER FACTOR	4W, 6W, 8W, 10W, 12W >0.9, 2W<0.9
OPERATING VOLTAGE	MULTIVOLT: 110-277VAC, 50/60 Hz
DRIVER	INTEGRAL TO FIXTURE; DE-RATED POWER AND SYNCHRONOUS START-UP AT FULL BRIGHTNESS
STARTUP TEMPERATURE	-40˚F TO 122˚F (-40˚C TO 50˚C)
OPERATING TEMPERATURE	-40˚F TO 122˚F (-40˚C TO 50˚C)
STORAGE TEMPERATURE	-40˚F TO 176˚F (-40˚C TO 80˚C)

ECOSENSE LIGHTING INC.
837 NORTH SPRING STREET
SUITE 103
LOS ANGELES, CA 90012

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T • 855.632.6736
855.6.ECOSEN

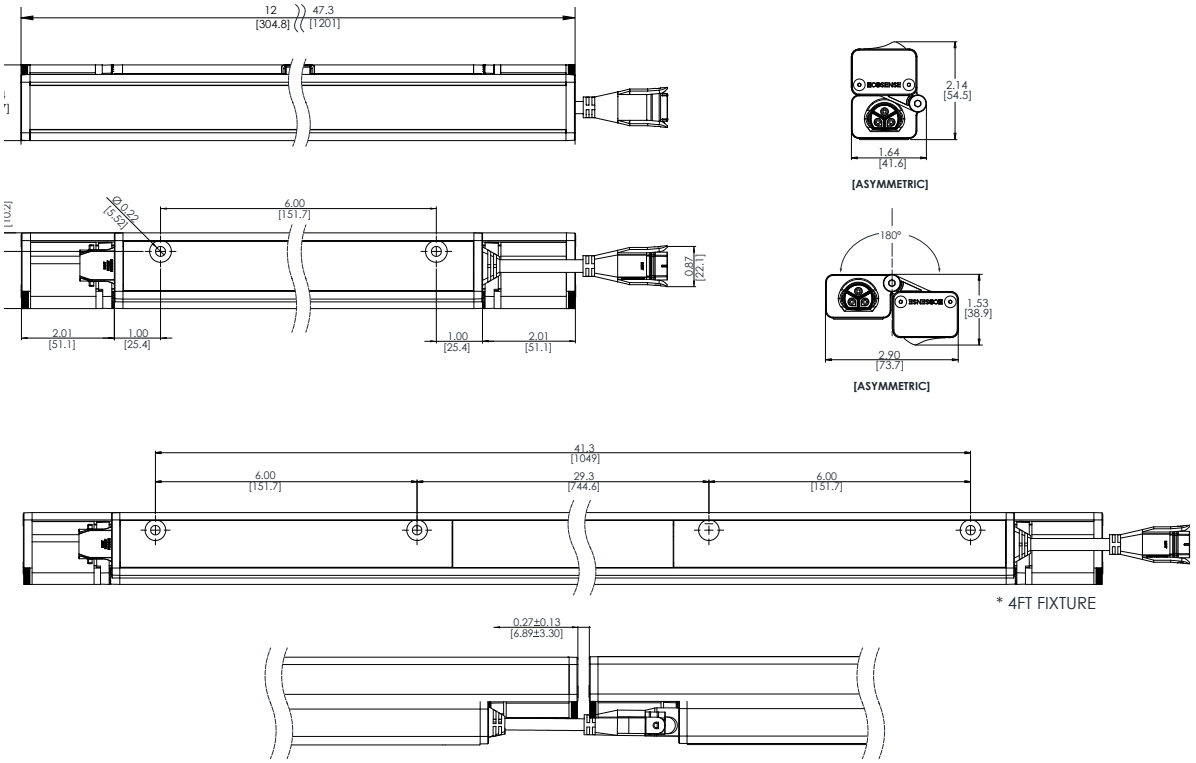
ECOSENSELIGHTING.COM

20171120

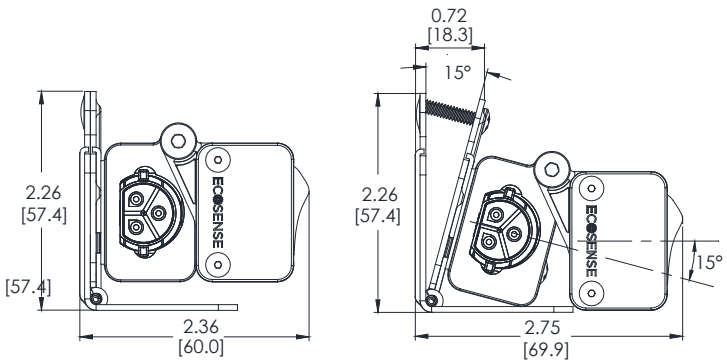
SUMMIT CREDIT UNION
MORELAND

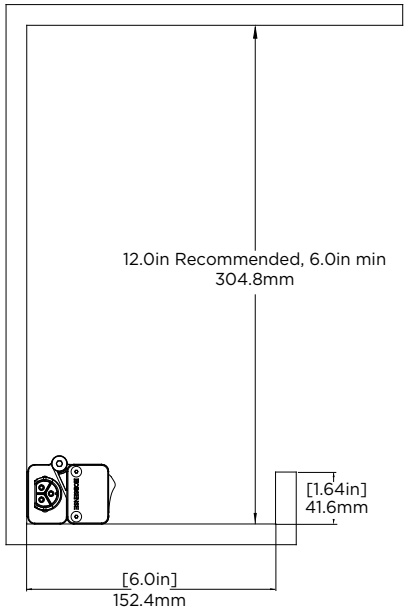
TYPE: OL1

DATE	PROJECT	FIRM	TYPE



Fine Adjustable L-Bracket:





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SUMMIT CREDIT UNION MORELAND

TYPE: OL1

D-Series Size 0
LED Area Luminaire

Catalog Number

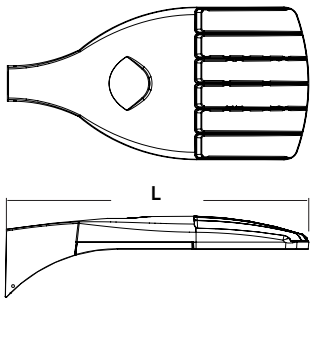
Notes

Type

Hit the Tab key or mouse over the page to see all interactive elements.

Specifications

EPA:	0.95 ft² (.09 m²)
Length:	26″ (66.0 cm)
Width:	13″ (33.0 cm)
Height:	7″ (17.8 cm)
Weight (max):	16 lbs (7.25 kg)



A+ Capable Luminaire

This item is an A+ capable luminaire, which has been designed and tested to provide consistent color appearance and system-level interoperability.

- All configurations of this luminaire meet the Acuity Brands' specification for chromatic consistency
- This luminaire is A+ Certified when ordered with DTL® controls marked by a shaded background. DTL DLL equipped luminaires meet the A+ specification for luminaire to photocontrol interoperability1
- This luminaire is part of an A+ Certified solution for ROAM® or XPoint™ Wireless control networks, providing out-of-the-box control compatibility with simple commissioning, when ordered with drivers and control options marked by a shaded background[1]

To learn more about A+, visit www.acuitybrands.com/aplus.

1. See ordering tree for details.
2. A+ Certified Solutions for ROAM require the order of one ROAM node per luminaire. Sold Separately: Link to Roam; Link to DTL DLL

A+ Capable options indicated by this color background.

Ordering Information

EXAMPLE: DSX0 LED P6 40K T3M MVOLT SPA DDBXD

DSX0 LED

Series	LEDs	Color temperature	Distribution	Voltage	Mounting
DSX0 LED	**Forward optics** P1 P4 P7 P2 P5 P3 P6 **Rotated optics** P10[1] P12[1] P11[1] P13[1]	30K 3000 K 40K 4000 K 50K 5000 K AMBPC Amber phosphor converted[2]	T1S Type I short T2S Type II short T2M Type II medium T3S Type III short T3M Type III medium T4M Type IV medium TFTM Forward throw medium T5VS Type V very short T5S Type V short T5M Type V medium T5W Type V wide BLC Backlight control[2,3] LCCO Left corner cutoff[2,3] RCCO Right corner cutoff[2,3]	MVOLT[4,5] 120[6] 208[5,6] 240[5,6] 277[6] 347[5,6,7] 480[5,6,7]	**Shipped included** SPA Square pole mounting RPA Round pole mounting WBA Wall bracket SPUMBA Square pole universal mounting adaptor[8] RPUMBA Round pole universal mounting adaptor[8] **Shipped separately** KMA8 DDBXD U Mast arm mounting bracket adaptor (specify finish)[9]

Control options			Other options	Finish *(required)*	
Shipped installed		PIRH1FC3V Bi-level, motion/ambient sensor, 15-30′ mounting height, ambient sensor enabled at 1fc[5,13,14]	**Shipped installed**	DDBXD	Dark bronze
NLTAIR2	nLight AIR generation 2 enabled[10]	BL30 Bi-level switched dimming, 30%[5,16,17]	HS House-side shield[20]	DBLXD	Black
PER	NEMA twist-lock receptacle only (control ordered separate)[11]	BL50 Bi-level switched dimming, 50%[5,16,17]	SF Single fuse (120, 277, 347V)[6]	DNAXD	Natural aluminum
PER5	Five-wire receptacle only (control ordered separate)[11,12]	PNMTDD3 Part night, dim till dawn[5,18]	DF Double fuse (208, 240, 480V)[6]	DWHXD	White
PER7	Seven-wire receptacle only (control ordered separate)[11,12]	PNMT5D3 Part night, dim 5 hrs[5,18]	L90 Left rotated optics[1]	DDBTXD	Textured dark bronze
DMG	0-10V dimming extend out back of housing for external control (control ordered separate)	PNMT6D3 Part night, dim 6 hrs[5,18]	R90 Right rotated optics[1]	DBLBXD	Textured black
PIR	Bi-level, motion/ambient sensor, 8-15′ mounting height, ambient sensor enabled at 5fc[5,13,14]	PNMT7D3 Part night, dim 7 hrs[5,18]	DDL Diffused drop lens[20]	DNATXD	Textured natural aluminum
PIRH	Bi-level, motion/ambient sensor, 15-30′ mounting height, ambient sensor enabled at 5fc[5,13,14]	FAO Field adjustable output[19]	**Shipped separately**	DWHGXD	Textured white
PIRHN	Network, Bi-Level motion/ambient sensor[15]		BS Bird spikes[21]		
PIR1FC3V	Bi-level, motion/ambient sensor, 8-15′ mounting height, ambient sensor enabled at 1fc[5,13,14]		EGS External glare shield[21]		

SUMMIT CREDIT UNION
MORELAND

TYPE: OP1

Performance Data

Lumen Output

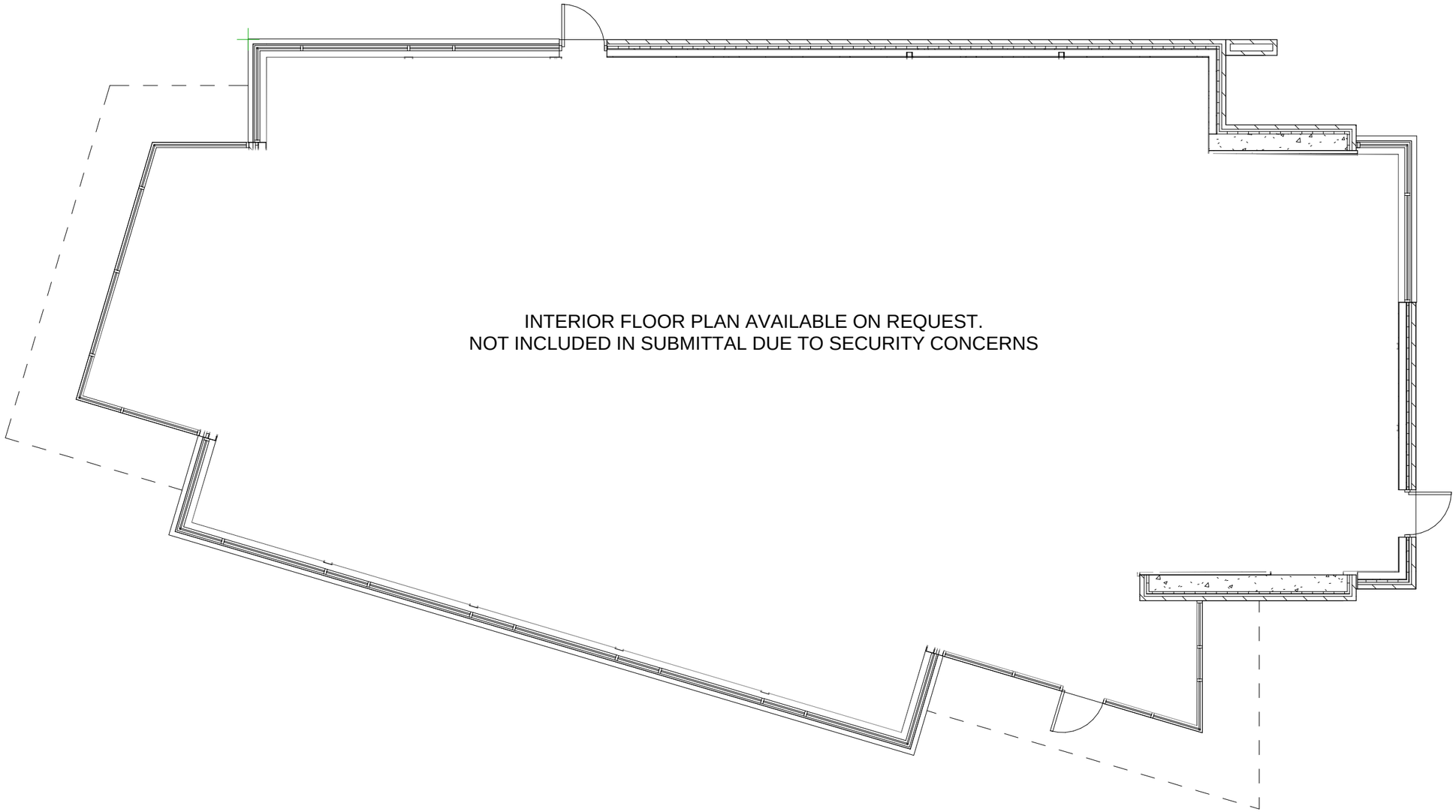
Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of the configurations shown, within the tolerances allowed by Lighting Facts. Contact factory for performance data on any configurations not shown here.

Forward Optics

LED Count	Drive Current	Power Package	System Watts	Dist. Type	30K (3000 K, 70 CRI)					40K (4000 K, 70 CRI)					50K (5000 K, 70 CRI)					AMBPC (Amber Phosphor Converted)				
					Lumens	B	U	G	LPW	Lumens	B	U	G	LPW	Lumens	B	U	G	LPW	Lumens	B	U	G	LPW
40	700	**P5**	89W	T1S	10,831	2	0	2	122	11,668	2	0	2	131	11,816	2	0	2	133					
				T2S	10,820	2	0	2	122	11,656	2	0	2	131	11,803	2	0	2	133					
				T2M	10,876	2	0	2	122	11,716	2	0	2	132	11,864	2	0	2	133					
				T3S	10,532	2	0	2	118	11,346	2	0	2	127	11,490	2	0	2	129					
				T3M	10,849	2	0	2	122	11,687	2	0	2	131	11,835	2	0	2	133					
				T4M	10,613	2	0	3	119	11,434	2	0	3	128	11,578	2	0	3	130					
				TFTM	10,842	2	0	2	122	11,680	2	0	2	131	11,828	2	0	2	133					
				T5VS	11,276	3	0	1	127	12,148	3	0	1	136	12,302	3	0	1	138					
				T5S	11,286	3	0	1	127	12,158	3	0	1	137	12,312	3	0	1	138					
				T5M	11,257	4	0	2	126	12,127	4	0	2	136	12,280	4	0	2	138					
				T5W	11,344	4	0	3	127	12,221	4	0	3	137	12,375	4	0	3	139					
				BLC	8,890	1	0	2	100	9,576	1	0	2	108	9,698	1	0	2	109					
				LCCO	6,615	1	0	3	74	7,126	1	0	3	80	7,216	1	0	3	81					
				RCCO	6,615	1	0	3	74	7,126	1	0	3	80	7,216	1	0	3	81					
40	1050	**P6**	134W	T1S	14,805	3	0	3	110	15,949	3	0	3	119	16,151	3	0	3	121	6,206	2	0	2	68
				T2S	14,789	3	0	3	110	15,932	3	0	3	119	16,134	3	0	3	120	6,322	2	0	2	69
				T2M	14,865	3	0	3	111	16,014	3	0	3	120	16,217	3	0	3	121	6,201	2	0	2	68
				T3S	14,396	3	0	3	107	15,509	3	0	3	116	15,705	3	0	3	117	6,247	1	0	2	69
				T3M	14,829	2	0	3	111	15,975	3	0	3	119	16,177	3	0	3	121	6,308	2	0	2	69
				T4M	14,507	2	0	3	108	15,628	3	0	3	117	15,826	3	0	3	118	6,275	1	0	2	69
				TFTM	14,820	2	0	3	111	15,965	3	0	3	119	16,167	3	0	3	121	6,203	1	0	2	68
				T5VS	15,413	4	0	1	115	16,604	4	0	1	124	16,815	4	0	1	125	6,671	2	0	0	73
				T5S	15,426	3	0	1	115	16,618	4	0	1	124	16,828	4	0	1	126	6,569	2	0	0	72
				T5M	15,387	4	0	2	115	16,576	4	0	2	124	16,786	4	0	2	125	6,491	3	0	1	71
				T5W	15,506	4	0	3	116	16,704	4	0	3	125	16,915	4	0	3	126	6,504	3	0	2	71
				BLC	12,151	1	0	2	91	13,090	1	0	2	98	13,255	1	0	2	99					
				LCCO	9,041	1	0	3	67	9,740	1	0	3	73	9,863	1	0	3	74					
				RCCO	9,041	1	0	3	67	9,740	1	0	3	73	9,863	1	0	3	74					
40	1300	**P7**	166W	T1S	17,023	3	0	3	103	18,338	3	0	3	110	18,570	3	0	3	112					
				T2S	17,005	3	0	3	102	18,319	3	0	3	110	18,551	3	0	3	112					
				T2M	17,092	3	0	3	103	18,413	3	0	3	111	18,646	3	0	3	112					
				T3S	16,553	3	0	3	100	17,832	3	0	3	107	18,058	3	0	3	109					
				T3M	17,051	3	0	3	103	18,369	3	0	3	111	18,601	3	0	3	112					
				T4M	16,681	3	0	3	100	17,969	3	0	3	108	18,197	3	0	3	110					
				TFTM	17,040	3	0	3	103	18,357	3	0	4	111	18,590	3	0	4	112					
				T5VS	17,723	4	0	1	107	19,092	4	0	1	115	19,334	4	0	1	116					
				T5S	17,737	4	0	2	107	19,108	4	0	2	115	19,349	4	0	2	117					
				T5M	17,692	4	0	2	107	19,059	4	0	2	115	19,301	4	0	2	116					
				T5W	17,829	5	0	3	107	19,207	5	0	3	116	19,450	5	0	3	117					
				BLC	13,971	2	0	2	84	15,051	2	0	2	91	15,241	2	0	2	92					
				LCCO	10,396	1	0	3	63	11,199	1	0	3	67	11,341	1	0	3	68					
					10,396	1	0	3	63	11,199	1	0	3	67	11,341	1	0	3	68					

SUMMIT CREDIT UNION
MORELAND

TYPE: OP1



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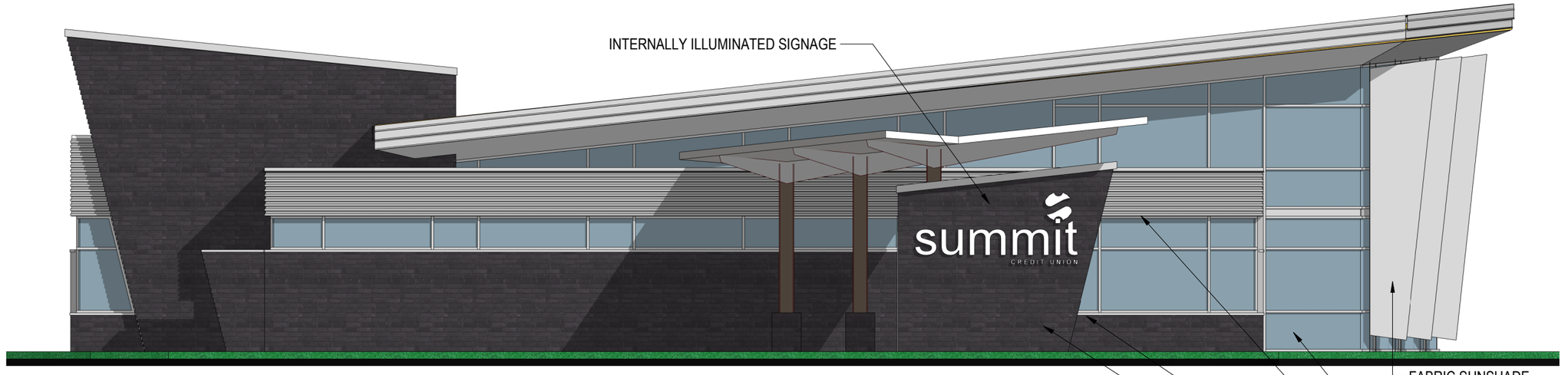
PA201

FIRST FLOOR PLAN

SCALE: 1/8" = 1'-0"

0 4 8 16

STRANG



1 PA410

SOUTHWEST ELEVATION

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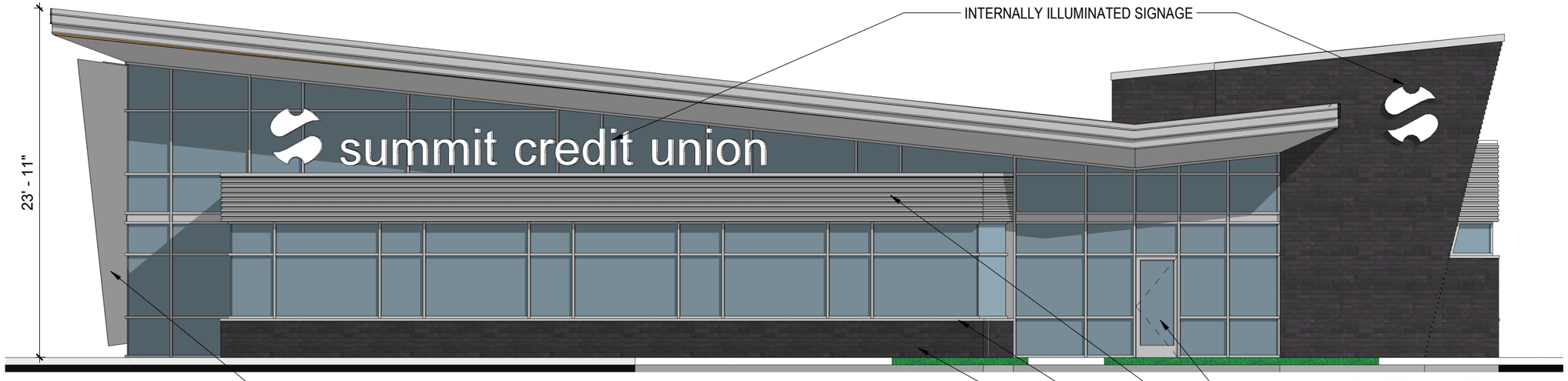

2 PA410

NORTHEAST ELEVATION

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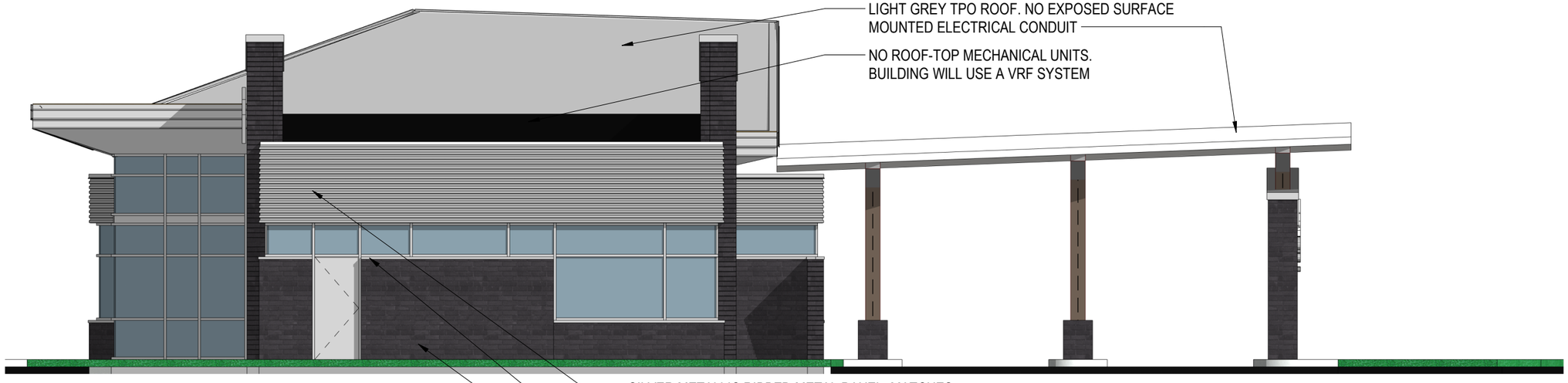
STRANG



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PA411

NORTHWEST ELEVATION

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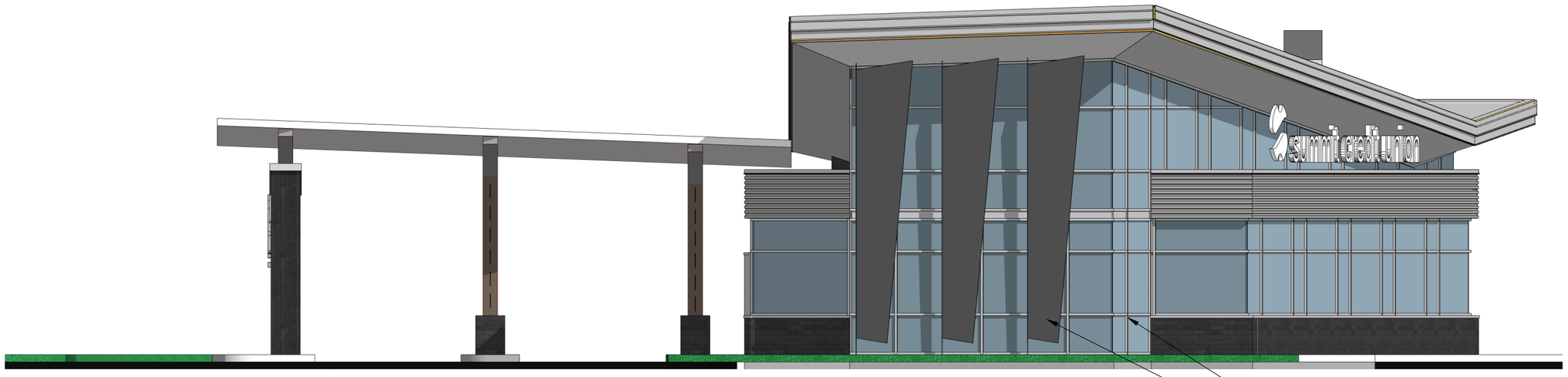

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SOUTHEAST ELEVATION

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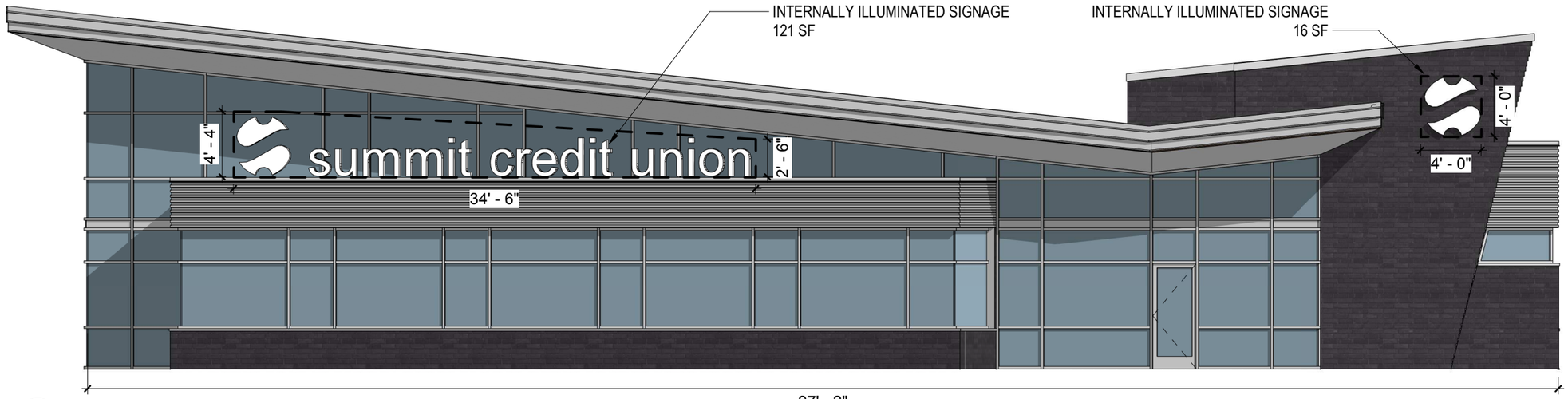
STRANG



1 / 403B **NORTHEAST ELEVATION SIGNAGE**

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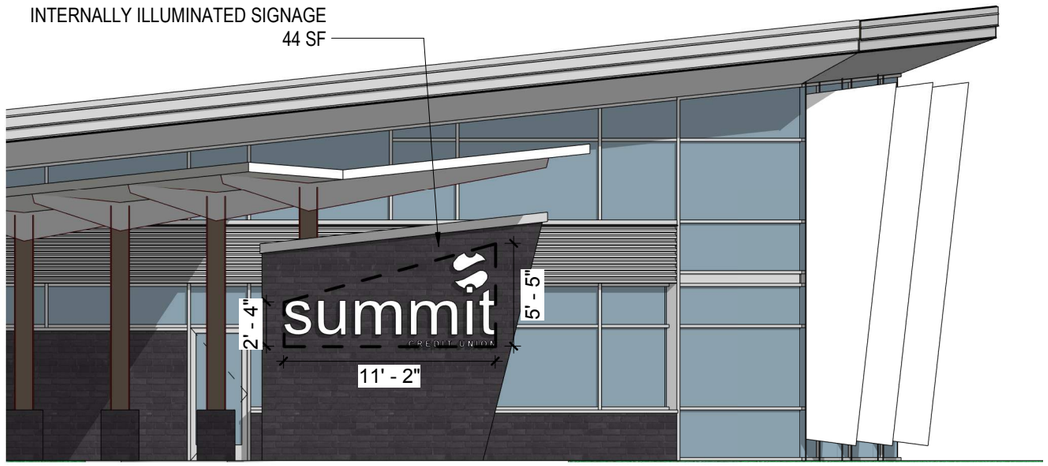

2 / 403B **SOUTHWEST ELEVATION SIGNAGE**

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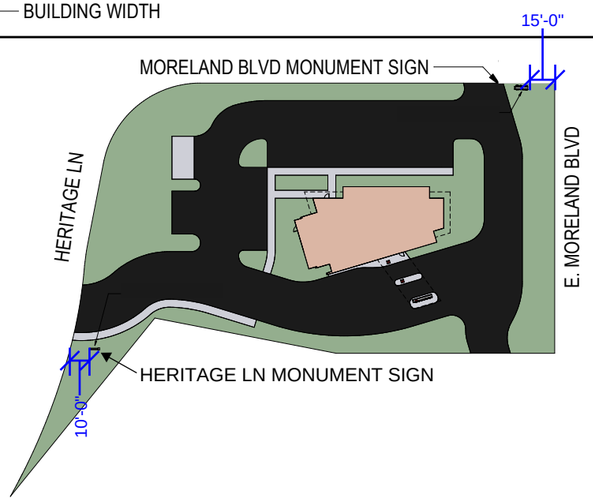
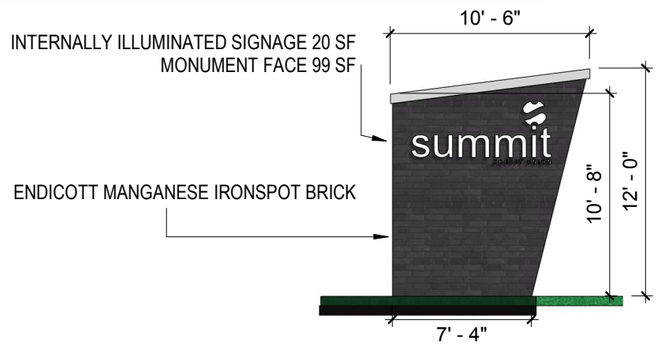


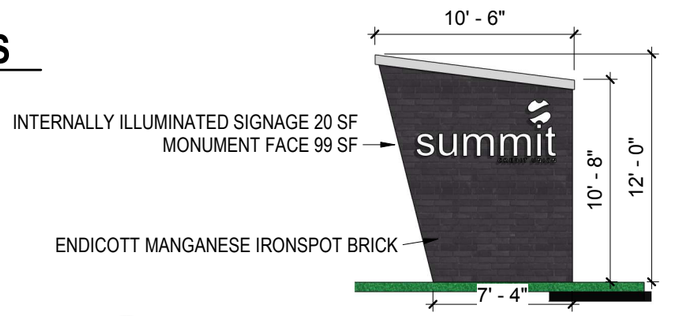
5 / 403B **MONUMNET SIGN LOCATIONS**

SCALE: NTS



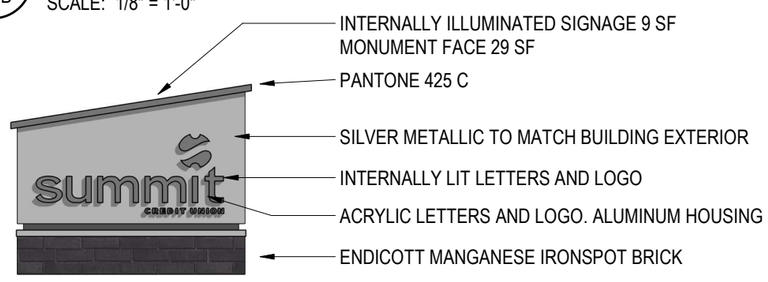
6 / 403B **MORELAND MONUMENT WEST**

SCALE: 1/8" = 1'-0"



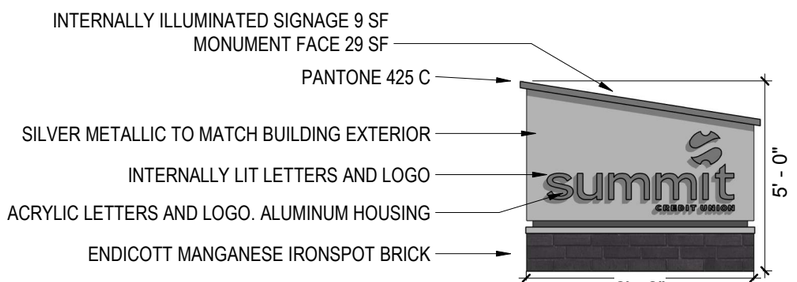
7 / 403B **MORELAND MONUMENT EAST**

SCALE: 1/8" = 1'-0"



4 / 403B **HERITAGE LN MONUMENT EAST ELEVATION**

SCALE: 1/4" = 1'-0"



3 / 403B **HERITAGE LN MONUMENT WEST ELEVATION**

SCALE: 1/4" = 1'-0"

STRANG

Summit Credit Union – Waukesha Branch
Waukesha, Wisconsin
Stormwater Management and Erosion Control Plan

www.JSDinc.com



Planning & Development
Site/Civil Engineering
Transportation Engineering
Structural Engineering
Water Resources
Landscape Architecture
Surveying & Mapping
Construction Management

Prepared for:
Summit Credit Union
4800 American Parkway
Madison, WI 53718

JSD Project No.: 18-8469

April 6, 2018

Prepared by: Corey Huhta, P.E, C.F.M

JSD Professional Services, Inc.
• Engineers • Surveyors • Planners

TABLE OF CONTENTS

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Future questions and comments can be directed to:

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1.0 INTRODUCTION

This technical report shall serve as the stormwater management design report for the Summit Credit Union project in the City of Waukesha, Waukesha County, Wisconsin.

The proposed project is a 1.13-acre project located on Lot of Certified Survey Map (CSM) 10663. The site is a redevelopment of the existing Sonic Drive-in restaurant between East Moreland Road (USH 18) and Heritage Lane. The project scope includes the demolition of the existing building, drive-in, parking canopies, and associated parking lots. The project consists of a 3,900 square foot building, 20 parking stalls, reconnection of access drives, and an underground water quality chamber. The stormwater facilities are reconnected to the storm sewer pipe connection in Heritage Lane. The proposed construction start date is anticipated for Spring 2019 with project completion by Fall 2019.

2.0 EXISTING CONDITIONS

The existing impervious area of the site is 0.752 acres consisting of asphalt parking, driveways, sidewalk, and building footprint. The proposed impervious of the site is 0.706 acres consisting of the same. There is a decrease of 0.044 acres of impervious area with an overall site impervious ratio of 62.4%. The existing site drains to an existing private stormwater system that connects to public storm sewer within Heritage Lane to the north. The existing site generally slopes to the north with a relief of 11 feet across the site. Refer to **Appendix 1** for the ALTA/NSPS Land Title Survey for the project.

A geotechnical report is being prepared for the site and will be provided during permitting. The NRCS web soil survey report was consulted for hydrologic soil groups. The NCRS web soil survey report is located in **Appendix 2**.

Stormwater runoff form the existing site consists of a single watershed. An existing watershed map can be found in **Appendix 4**.

3.0 DESIGN CRITERIA

3.1 Municipal Code of the City of Waukesha, Wisconsin
Chapter 32 – Stormwater Management and Erosion Control

3.3 Waukesha County Code of Ordinances
Chapter 14, Article VIII – Stormwater Management and Erosion Control Ordinance

3.4 Wisconsin Administrative Code
WDNR – Technical Standards (NR 151 and NR 216)

The site will need to meet the criteria for a redevelopment site. Therefore, the requirements for this site include:

- Maintain pre-development peak discharges for the 1-, 5-, and 100-year, 24-hour storm events.
- Reduce the total suspended solids by 40% during the 1-year, 24-hour storm event assuming no re-suspension.

4.0 ANALYSIS

The stormwater management and erosion control plan have been written and analyzed for the development. Construction will include both on-site stormwater management and erosion control.

HydroCAD© stormwater modeling system (Version 10.00-20) has been used to analyze stormwater characteristics for the development. HydroCAD uses the accepted TR-55 – Urban Hydrology for Small Watersheds methodology for determining peak discharge runoff rates. The NOAA Atlas 14 rainfall depths for Waukesha County and the MSE 3 rainfall distribution were used in the hydrologic model. Due to the urbanization of the site, the minimum time of concentration of 6 minutes has been used per TR-55 standard methodology.

Curve numbers for the post-development ground cover were selected using the standard values specified TR-55. The maximum pre-development curve numbers were set per the WDNR Technical Standard NR 151. The curve number used for grassland was used in post-development conditions for pervious ground cover.

See **Table 1** below for the curve numbers that used for hydrologic modeling.

Table 1. Runoff Curve Number

Runoff Curve Number	Hydrologic Soil Group			
	A	B	C	D
Woodland	30	55	70	77
Grassland	39	61	71	78
Cropland	55	69	78	83
Impervious	98	98	98	98
Water Bodies	100	100	100	100

Refer to **Appendix 4 and 5** for further information on pre-development and post-development hydrologic modeling for the development.

Sediment control used separate WinSLAMM Version 10.3 to account for total suspended solids (TSS) removal for the site. Refer to **Appendix 7** for further information on sediment control calculations.

The storm sewer peak flow rates were calculated using the Rational Method to determine peak flow rates for the 10-year storm event. The storm sewer was analyzed per the Wisconsin Department of Natural Resources Facility Design Manual (FDM) for a closed conduit system. Refer to **Appendix 9** for further information on the storm sewer sizing.

5.0 DESIGN

The underground water quality chamber proposed will provide total suspended solids reduction and peak discharge control for the project. Parking lot runoff will be collected within private storm sewer, treated within the underground water quality chamber, and ultimately discharged to the existing storm sewer within Heritage Lane. The roof runoff will be collected through roof drain connections and route to the private storm sewer system. A small portion of the access driveways and pervious area totaling 0.30 acres will match existing drainage patterns and will leave the site untreated and drain to Heritage Road public storm sewer.

The private storm sewer system consist of 5 curb inlets which are connected to an underground water quality chamber. The underground chamber will have a three foot sump below the outlet which acts as a sedimentation basin and provides settlement for suspended solids. The water quality chamber ultimately connects to the public storm sewer in Heritage Lane. The water quality chamber will settle out up to 20 micron particle. As designed, the stormwater management facility provides approximately 40.5% TSS reduction for the site.

Due to existing drainage patterns, approximately 0.13 acres of off-site area surface drains onto the project. This runoff will be collected into the private storm sewer and routed through the chamber. However, this off-site drainage was not considered in the TSS calculations as it is an off-site area.

A proposed watershed map can be referenced in **Appendix 5.** Preliminary construction plans of improvements can be found in in **Appendix 3**.

5.1 Peak Discharge

Municipal Code of the City of Waukesha, WI Sec. 13.10 (d)(1). Total Sediment Control
A. Minimum requirement. To minimize downstream bank erosion and the failure of downstream conveyance systems, the calculated post-development peak storm water discharge rate shall not exceed the calculated pre-development discharge rates for the 2-year, 10-year, and 100-year, 24-hour design storms.

The proposed redevelopment of the site maintains existing drainage patterns and removes existing impervious surfaces on-site. This reduction reduces the uncontrolled peak discharges for the 2-, 10-, and 100-year, 24-hour design storms. The water quality chamber provides additional peak discharge reduction as runoff is routed through the system.

TABLE 2: PRE-SETTLEMENT VERSUS POST-DEVELOPMENT PEAK RUNOFF RATES

	2-year	10-year	100-year
Rainfall for each 24-hour storm event (inches)	4.17	6.47	11.35
Pre-development peak discharge rate (cfs)	**4.17**	**6.47**	**11.35**
	.		
Post-Development peak discharge rate without controls (cfs)	4.04	6.34	11.23
Post-Development peak discharge rate with detention (cfs)	**3.30**	**5.10**	**10.74**
Difference: Post-Development peak discharge rates with detention vs. Pre-Development peak discharge Rate (cfs)	**-0.87**	**-1.37**	**-0.61**

Table 2 above shows the overall development pre-development, the uncontrolled post-development, and post-development peak runoff rates comparison.

5.2 Sediment Control

Municipal Code of the City of Waukesha, WI Sec. 13.10 (d)(2). Total Sediment Control
By design, each storm water management plan shall meet the following post-development total suspended solids reduction targets, based on average annual rainfalls, as compared to no runoff management controls:

- *(i.) For new land development, 80% reduction in total suspended solids load;*
- *(ii.) For redevelopment, 40% reduction of total suspended solids load;*
- *(iii.) For in-fill development that occurs prior to October 1, 2012, 40 % reduction total suspended solids load.*
- *(iv.) For in-fill development that occurs after October 1, 2012, 80% reduction of total suspended solids load.*

The underground water quality chamber has been designed to provide sediment control for the site. Due to existing drainage patterns, approximately 0.30 acres of drainage area will bypass treatment. The overall development yields approximately 470 pounds of particulate solids. The underground water quality chamber removes approximately 190 pounds of particulate solids for a 40.5% total suspended solids reduction. The development was modeled using WinSLAMM Version 10.3.4. See **Appendix 6** for the sediment control modeling inputs and outputs.

6.0 EROSION CONTROL

Erosion control measures onsite will conform to the Wisconsin Department of Natural Resources Technical Standards and City of Waukesha requirements. These measures include, but are not

limited to: construction entrances, silt fencing, check dams, grading, seeding, mulching, and erosion matting. Construction sequencing shall be as follows:

1. Install silt fence in the appropriate locations and stone tracking pads on the entrances to be used by the construction vehicles to access the site.
2. Remove existing pavement and structures.
3. Install storm sewer system.
4. Excavate building foundations.
5. Complete all other grading.
6. Install storm sewer and inlet protection measures.
7. Install aggregate base course and paving in parking areas.
8. Stabilize newly graded soils.
9. Complete exterior building work and downspouts
10. Remove temporary erosion control practices.

For more detailed requirements regarding erosion control, refer to the proposed construction plans in **Appendix 3** and Universal Soil Loss Equation (USLE) worksheet in **Appendix 9**.

7.0 CONCLUSION

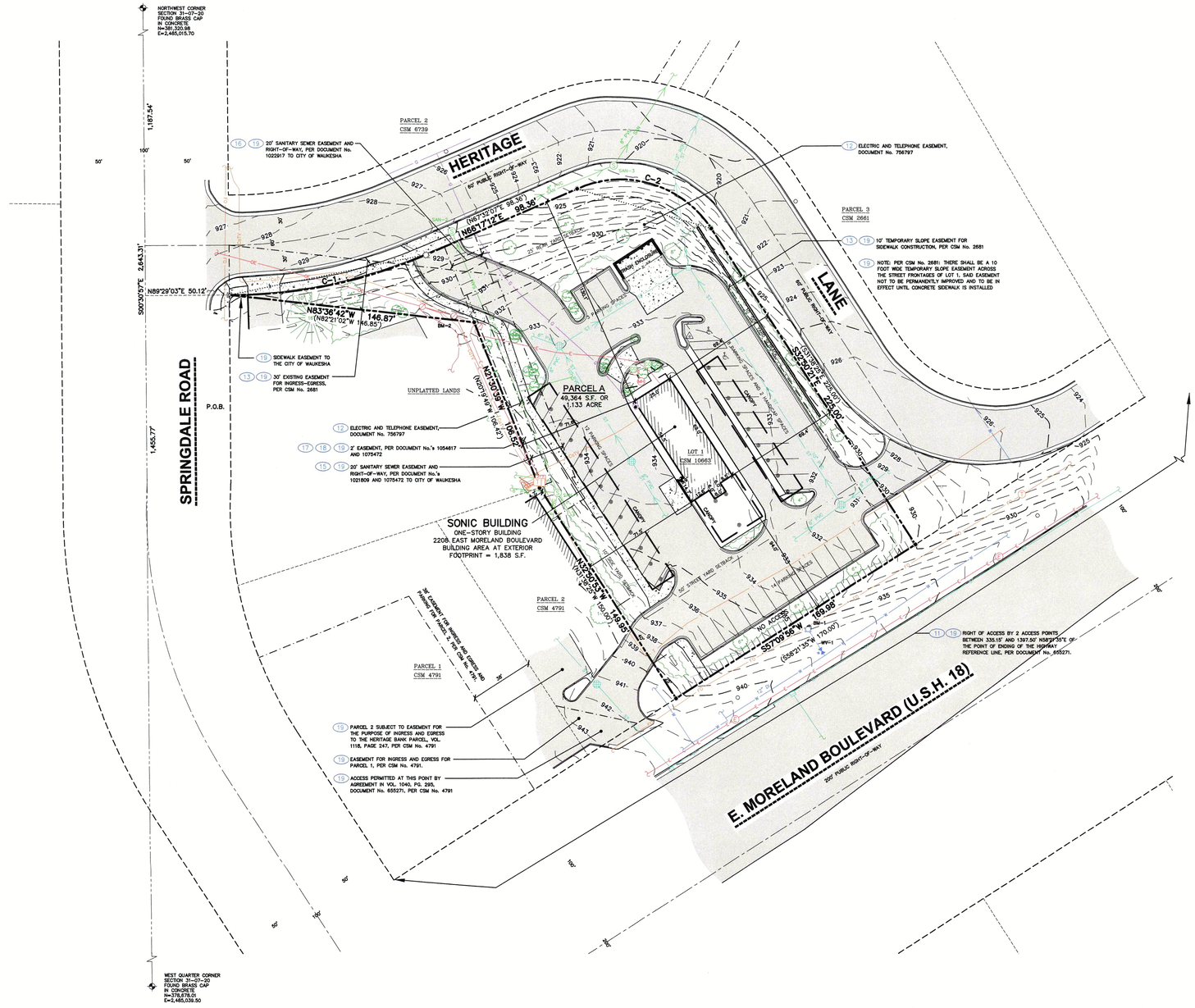
Stormwater management features for Summit Credit Union – Waukesha Branch have been designed in accordance with applicable standards per Chapter 32 of the Municipal Code of the City of Waukesha, Chapter 14 of the Waukesha County Code of Ordinances, and WDNR standards NR151 and NR216. The development features an underground water quality chamber and public storm sewer. These facilities will treat for sediment, oil and grease, runoff rate, infiltration, and outlet controls. Erosion control practices will limit soil loss to 7.5 tons per acre annually, and regulate soil transportation within development boundaries.

APPENDIX 1

ALTA/NSPS LAND TITLE SURVEY

ALTA/NSPS LAND TITLE SURVEY

LOT 1, CERTIFIED SURVEY MAP No. 10663, LOCATED IN THE NORTHWEST QUARTER OF THE NORTHWEST QUARTER OF SECTION 31, TOWNSHIP 07 NORTH, RANGE 20 EAST, CITY OF WAUKESHA, WAUKESHA COUNTY, WISCONSIN.



LEGEND

- GOVERNMENT CORNER
- 1" IRON PIPE FOUND
- CHISELED "X" FOUND
- COTTON SPINDLE SET
- FINISHED FLOOR SHOT LOCATION
- SIGN
- SANITARY MANHOLE
- CLEAN OUT
- HYDRANT
- WATER VALVE
- ROUND CASTED INLET
- CURB INLET
- GAS REGULATOR/METER
- MANHOLE – GREASE TRAP
- ELECTRIC MANHOLE
- ELECTRIC PEDESTAL
- POWER POLE W/GUY
- LIGHT POLE
- TELEPHONE PEDESTAL
- TELEPHONE MANHOLE
- DECIDUOUS TREE
- CONIFEROUS TREE
- BUSH
- HANDICAP PARKING
- PARCEL BOUNDARY
- SECTION LINE
- RIGHT-OF-WAY LINE
- CENTERLINE
- CHORD LINE
- PLATTED LOT LINE
- EASEMENT LINE
- CONCRETE CURB & GUTTER
- SANITARY SEWER
- WATER LINE
- STORM SEWER
- NATURAL GAS
- OVERHEAD ELECTRIC DISTRIBUTION
- UNDERGROUND ELECTRIC
- FIBER OPTIC
- UNDERGROUND TELEPHONE
- UNDERGROUND CABLE
- EDGE OF WOODS OR BRUSH
- BUILDING
- WALL LINE
- 935 INDEX CONTOUR
- 934 INTERMEDIATE CONTOUR
- x924.49 SPOT ELEVATION
- BITUMINOUS PAVEMENT
- RETAINING WALL
- CONCRETE PAVEMENT
- NO ACCESS
- PAVEMENT STRIPING
- END OF FLAGGED UTILITIES
- ( ) DENOTES RECORD DATA DEPICTING THE SAME LINE ON THE GROUND AS RETRACED BY THIS SURVEY
- CANOPY COLUMN (TYP)
- EDGE OF CANOPY

NOTES

1. FIELD WORK PERFORMED BY JSD PROFESSIONAL SERVICES, INC. ON MARCH 29, 2018.
2. BEARINGS FOR THIS SURVEY AND MAP ARE BASED ON THE SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION (SEWRPC), THE WEST LINE OF THE NORTHWEST QUARTER OF SECTION 31-07-20, BEARS S00°30'57"E.
3. ELEVATIONS ARE BASED ON THE NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NGVD29). BENCHMARK IS A BRASS CAP IN CONCRETE MARKING THE NORTHWEST CORNER OF SECTION 31-07-20, ELEVATION = 901.30'
4. CONTOUR INTERVAL IS ONE FOOT.
5. SUBSURFACE UTILITIES AND FEATURES SHOWN ON THIS MAP HAVE BEEN APPROXIMATED BY LOCATING SURFICIAL FEATURES AND APPURTENANCES, LOCATING DIGGERS HOTLINE FIELD MARKINGS AND BY REFERENCE TO UTILITY RECORDS AND MAPS. DIGGER'S HOTLINE TICKET No.s 20181108335, 20181108347, 20181108366, 20181108372, 20181108416 AND 20181108425, WITH A CLEAR DATE OF MARCH 26, 2018.
6. UTILITY COMPANIES CONTACTED THRU DIGGERS HOTLINE:
   - CITY OF DELAFIELD DEPARTMENT OF PUBLIC WORKS
   - WISCONSIN DOT–ITS EQUIPMENT
   - AT&T TRANSMISSION
   - CENTURYLINK
   - WE ENERGIES
   - WISCONSIN DOT SOUTHEAST REGION
   - LEVEL 3 COMMUNICATIONS
   - TIME WARNER CABLE
7. BEFORE EXCAVATION, APPROPRIATE UTILITY COMPANIES SHOULD BE CONTACTED. FOR EXACT LOCATION OF UNDERGROUND UTILITIES, CONTACT DIGGERS HOTLINE, AT 1.800.242.8511.
8. JSD PROFESSIONAL SERVICES, INC. DOES NOT GUARANTEE THAT THE BENCHMARK ELEVATIONS LISTED ON THIS MAP HAVE NOT BEEN DISTURBED SINCE THE DATE OF THIS SURVEY AND SHOULD BE VERIFIED PRIOR TO CONSTRUCTION ACTIVITIES.
9. SET BACKS ARE BASED ON CHAPTER 22, 22.37(7). THERE ARE NO REFERENCES MADE TO CORNER LOTS. SET BACKS ALONG HERITAGE LANE MAY BE GREATER, CONTACT CITY OF WAUKESHA ZONING DEPARTMENT.
10. SANITARY SEWER AND WATER SERVICE LATERAL SIZE AND LOCATION ARE UNKNOWN.

NOTES CORRESPONDING TO TABLE A REQUIREMENTS:

ITEM 3 THE SUBJECT PROPERTY LIES IN ZONE X (AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN) PER FEMA MAP NUMBER 55047901 86F, EFFECTIVE DATE OF NOVEMBER 19, 2008.

ITEM 6(b) CURRENT ZONING CLASSIFICATION IS B–5, COMMUNITY BUSINESS, FROM CITY WEB SITE.

ITEM 9 THERE ARE 10 REGULAR PARKING SPACES AND 1 HANDICAP SPACE FOR A TOTAL OF 11 PARKING SPACES.

ITEM 10(a) THERE ARE NO DIVISION OR PARTY WALLS WITH RESPECT TO ADJOINING PROPERTIES.

ITEM 11 SOURCE INFORMATION FROM PLANS AND MARKING WILL BE COMBINED WITH OBSERVED EVIDENCE OF UTILITIES PURSUANT TO SECTION 5.E.iv. TO DEVELOP A VIEW OF THE UNDERGROUND UTILITIES. HOWEVER, LACKING EXCAVATION, THE EXACT LOCATION OF UNDERGROUND FEATURES CANNOT BE ACCURATELY, COMPLETELY, AND RELIABLY DEPICTED. IN ADDITION, IN SOME JURISDICTIONS, 811 OR OTHER SIMILAR UTILITY LOCATE REQUESTS FROM SURVEYORS MAY BE IGNORED OR RESULT IN AN INCOMPLETE RESPONSE, IN WHICH CASE THE SURVEYOR SHALL NOTE ON THE PLAT OR MAP HOW THIS AFFECTED THE SURVEYOR'S ASSESSMENT OF THE LOCATION OF THE UTILITIES. WHERE ADDITIONAL OR MORE DETAILED INFORMATION IS REQUIRED, THE CLIENT IS ADVISED THAT EXCAVATION AND/OR A PRIVATE UTILITY LOCATE REQUEST MAY BE NECESSARY.

ITEM 16 THERE IS NO OBSERVED EVIDENCE OF CURRENT EARTH MOVING WORK, BUILDING CONSTRUCTION OR BUILDING ADDITIONS AT THE TIME OF THIS SURVEY.

ITEM 17 THERE ARE NO PROPOSED CHANGES IN THE STREET RIGHT–OF–WAY LINES PER CITY OF DELAFIELD. THERE IS NO OBSERVED EVIDENCE OF RECENT STREET OR SIDEWALK CONSTRUCTION OR REPAIRS.

ITEM 18 THERE HAS BEEN NO FIELD DELINEATION OF WETLANDS CONDUCTED FOR THIS SITE.

ITEM 19 ANY OFFSITE EASEMENT FOR THE SUBJECT PROPERTY IS SHOWN IN ITS ENTIRETY.

NOTES CORRESPONDING TO SCHEDULE B–SECTION TWO EXCEPTIONS
(CHICAGO TITLE INSURANCE COMPANY, COMMITMENT No.: CO–7333, COMMITMENT DATE: MARCH 6, 2018)

(10) EASEMENT(S) FOR THE PURPOSE(S) AND RIGHTS INCIDENTAL THERETO, AS GRANTED IN A DOCUMENT, GRANTED TO WISCONSIN TELEPHONE COMPANY AND WISCONSIN ELECTRIC POWER COMPANY, FOR UTILITY PURPOSES, RECORDED ON APRIL 6, 1960, AS DOCUMENT No. 520759.
THIS ITEM DOES NOT AFFECT THE SUBJECT PROPERTY AND IS NOT PLOTTED HEREON. (IS IN CURRENT HIGHWAY RIGH–OF–WAY).

(11) ACCESS LIMITATIONS AND DEVELOPMENT RESTRICTIONS SET FORTH IN INDENTURE RECORDED FEBRUARY 9, 1966 AS DOCUMENT No. 655271.
THIS ITEM DOES AFFECT THE SUBJECT PROPERTY AND IS PLOTTED HEREON.

(12) EASEMENT(S) FOR THE PURPOSE(S) AND RIGHTS INCIDENTAL THERETO, AS GRANTED IN A DOCUMENT, GRANTED TO WISCONSIN ELECTRIC POWER COMPANY AND WISCONSIN TELEPHONE COMPANY, FOR UTILITY PURPOSES, RECORDED ON MARCH 13, 1970, AS DOCUMENT No. 756797.
THIS ITEM DOES AFFECT THE SUBJECT PROPERTY AND IS PLOTTED HEREON.

(13) RECITALS AS SHOWN ON CERTIFIED SURVEY MAP No. 2681 RECORDED ON SEPTEMBER 1, 1976, AS DOCUMENT No. 965499, WHICH AMONG OTHER THINGS RECITES EASEMENT FOR INGRESS AND EGRESS, RESTRICTIONS AND NOTES.
THIS ITEM DOES AFFECT THE SUBJECT PROPERTY AND IS PLOTTED HEREON.

(14) MEMORANDUM OF AGREEMENT RECORDED MARCH 8, 1977 AS DOCUMENT No. 987077.
THIS ITEM DOES AFFECT THE SUBJECT PROPERTY AND IS NOT GRAPHIC IN NATURE, THEREFORE IT IS NOT PLOTTED HEREON.

(15) EASEMENT(S) FOR THE PURPOSE(S) AND RIGHTS INCIDENTAL THERETO, AS GRANTED IN A DOCUMENT, GRANTED TO THE CITY OF WAUKESHA, FOR SANITARY SEWER PURPOSES, RECORDED ON OCTOBER 25, 1977, AS DOCUMENT No. 1021809.
THIS ITEM DOES AFFECT THE SUBJECT PROPERTY AND IS PLOTTED HEREON.

(16) EASEMENT(S) FOR THE PURPOSE(S) AND RIGHTS INCIDENTAL THERETO, AS GRANTED IN A DOCUMENT, GRANTED TO THE CITY OF WAUKESHA, FOR SANITARY SEWER PURPOSES, RECORDED ON NOVEMBER 2, 1977, AS DOCUMENT No. 1022917.
THIS ITEM DOES AFFECT THE SUBJECT PROPERTY AND IS PLOTTED HEREON.

(17) EASEMENT(S) FOR THE PURPOSE(S) AND RIGHTS INCIDENTAL THERETO, AS GRANTED IN A DOCUMENT, GRANTED TO THE CITY OF WAUKESHA, FOR SANITARY SEWER PURPOSES, RECORDED ON JUNE 30, 1978, AS DOCUMENT No. 1054617.
THIS ITEM DOES AFFECT THE SUBJECT PROPERTY AND IS PLOTTED HEREON.

(18) SANITARY SEWER EASEMENT RECORDED DECEMBER 7, 1978 AS DOCUMENT No. 1075472.
THIS ITEM DOES AFFECT THE SUBJECT PROPERTY AND IS PLOTTED HEREON.

(19) RECITALS AS SHOWN ON CERTIFIED SURVEY MAP No. 10663 RECORDED ON MARCH 31, 2009, AS DOCUMENT No. 3641473, WHICH AMONG OTHER THINGS RECITES SIDEWALK EASEMENT, RESTRICTIONS, NOTES, INGRESS/EGRESS EASEMENT, CROSS ACCESS EASEMENT, TEMPORARY SLOPE EASEMENT FOR SIDEWALK CONSTRUCTION AND ACCESS LIMITATIONS.
THIS ITEM MAY AFFECT THE SUBJECT PROPERTY AND IS PLOTTED HEREON.

LEGAL DESCRIPTION (AS FURNISHED)
(CHICAGO TITLE INSURANCE COMPANY, COMMITMENT No.: CO–7333, COMMITMENT DATE: MARCH 6, 2018)

LOT 1 OF CERTIFIED SURVEY MAP No. 10663, RECORDED MARCH 31, 2009, IN VOLUME 102 OF CERTIFIED SURVEY MAPS ON PAGES 309 OT 313 AS DOCUMENT No. 3641473, A DIVISION OF PARCEL 6 OF CERTIFIED SURVEY MAP No. 2681 AND LANDS IN THE NORTHWEST 1/4 OF THE NORTHWEST 1/4 OF SECTION 31, TOWN 7 NORTH, RANGE 20 EAST, IN THE CITY OF WAUKESHA, COUNTY OF WAUKESHA, STATE OF WISCONSIN.

TAX KEY No.: WAKC 1130.115.001

ADDRESS: 2208 E. MORELAND BLVD.

SURVEYOR'S CERTIFICATE

TO:
i) PINNACLE WAUKESHA BURGERS, LLC, A WISCONSIN LIMITED LIABILITY COMPANY,
ii) BANK MUTUAL,
iii) CHICAGO TITLE INSURANCE COMPANY,

THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE 2016 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/NSPS LAND TITLE SURVEYS, JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS AND INCLUDES ITEMS 1, 2, 3, 4, 5, 6(b), 7(a), 7(b)(1), 7(c), 8, 9, 10(a), 11, 13, 14, 16, 17, 18, 19 AND 20 OF TABLE A THEREOF. THE FIELD WORK WAS COMPLETED ON MARCH 29, 2018.

JOHN KREBS, S–1878
PROFESSIONAL LAND SURVEYOR

4/4/18
DATE

WISCONSIN JOHN KREBS S–1878 McFARLAND, WISCONSIN LAND SURVEYOR

STORM SEWER MANHOLES					
STRUCT. ID	RIM ELEVATION	INVERT	ELEVATION	PIPE SIZE	PIPE TYPE
STM–1	930.77	NE	928.67	6"	PVC
		SW	928.68	6"	PVC
		NW	928.17	10"	PVC
STM–2	933.33	SE	930.98	6"	PVC
		NW	930.38	10"	PVC
STM–3	932.92	SE	929.62	10"	PVC
		SW	929.59	6"	PVC
		NW	930.29	6"	PVC
		NE	927.97	10"	PVC

STORM SEWER INLETS					
INLET ID	RIM ELEVATION	INVERT	ELEVATION	PIPE SIZE	PIPE TYPE
INL–1	931.90	SW	928.12	10"	PVC
		SE	926.28	10"	PVC
		NE	924.22	10"	PVC
INL–2	919.30	SW	916.73	10"	PVC
		NE	915.75	12"	RCP
INL–3	919.32	SW	915.47	12"	RCP
		NW	915.47	12"	RCP

SANITARY SEWER MANHOLES					
STRUCT. ID	RIM ELEVATION	INVERT	ELEVATION	PIPE SIZE	PIPE TYPE
SAN–1	936.92	SE	930.66	6"	PVC
		SW	930.51	6"	PVC
		NW	930.58	6"	PVC
		NW	930.21	8"	PVC
SAN–2	927.79	SE	922.65	8"	PVC
		NE	922.55	8"	PVC
SAN–3	920.49	SW	913.99	8"	PVC
		NE	913.79	8"	PVC

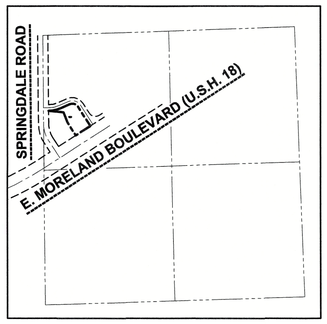
WATER VALVES					
VALVE No.	SIZE	RIM ELEVATION	INVERT	TOP NUT ELEVATION	PIPE INVERT
WV–1	10"	938.75	TN	932.45	930.70

TN=TOP NUT OF WATER VALVE

BENCHMARKS		
BENCH MARK	ELEVATION	DESCRIPTION
BM–1	938.42	ARROW ON HYDRANT IN FRONT OF SITE
BM–2	935.18	RR SPIKE IN UTILITY POLE, NORTHWEST CORNER OF SITE

*JSD PROFESSIONAL SERVICES, INC. DOES NOT GUARANTEE THAT THE BENCHMARK ELEVATIONS LISTED ON THIS MAP HAVE NOT BEEN DISTURBED SINCE THE DATE OF THIS SURVEY AND SHOULD BE VERIFIED PRIOR TO CONSTRUCTION ACTIVITIES.

CURVE TABLE					
CURVE	LENGTH	RADIUS	DELTA	CHORD	CHORD BEARING
C–1	120.51'	286.55'	24°05'43"	119.62'	N78°24'32"E
( )	120.51'	286.55'	24°05'43"	119.62'	N79°34'58"E
C–2	90.85'	63.96'	81°22'52"	83.40'	S73°24'56"E
( )	90.80'	63.96'	81°20'08"	83.36'	S72°10'24"E



VICINITY MAP
SCALE 1" = 600'

north
0 15' 30' 60'
SCALE: 1" = 30'

JSD Professional Services, Inc.
Engineers • Surveyors • Planners
CREATE THE VISION TELL THE STORY
MADISON | MILWAUKEE
KENOSHA | APPLETON | WAUSAU
MADISON REGIONAL OFFICE
161 HORIZON DRIVE, SUITE 101
VERONA, WISCONSIN 53593
P. 608.848.5060

CLIENT:
SUMMIT CREDIT UNION

CLIENT ADDRESS:
4800 AMERICAN PARKWAY
MADISON, WI 53718-8308

PROJECT:
WAUKESHA

PROJECT LOCATION:
CITY OF WAUKESHA
WAUKESHA COUNTY, WISCONSIN

PLAN MODIFICATIONS:

#	Date:	Description:
1	-	-
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		

Design/Drawn: JK
Approved: TJB

SHEET TITLE:
ALTA/NSPS LAND TITLE SURVEY

MAP NO: E–*
SHEET NUMBER:
1 OF 1

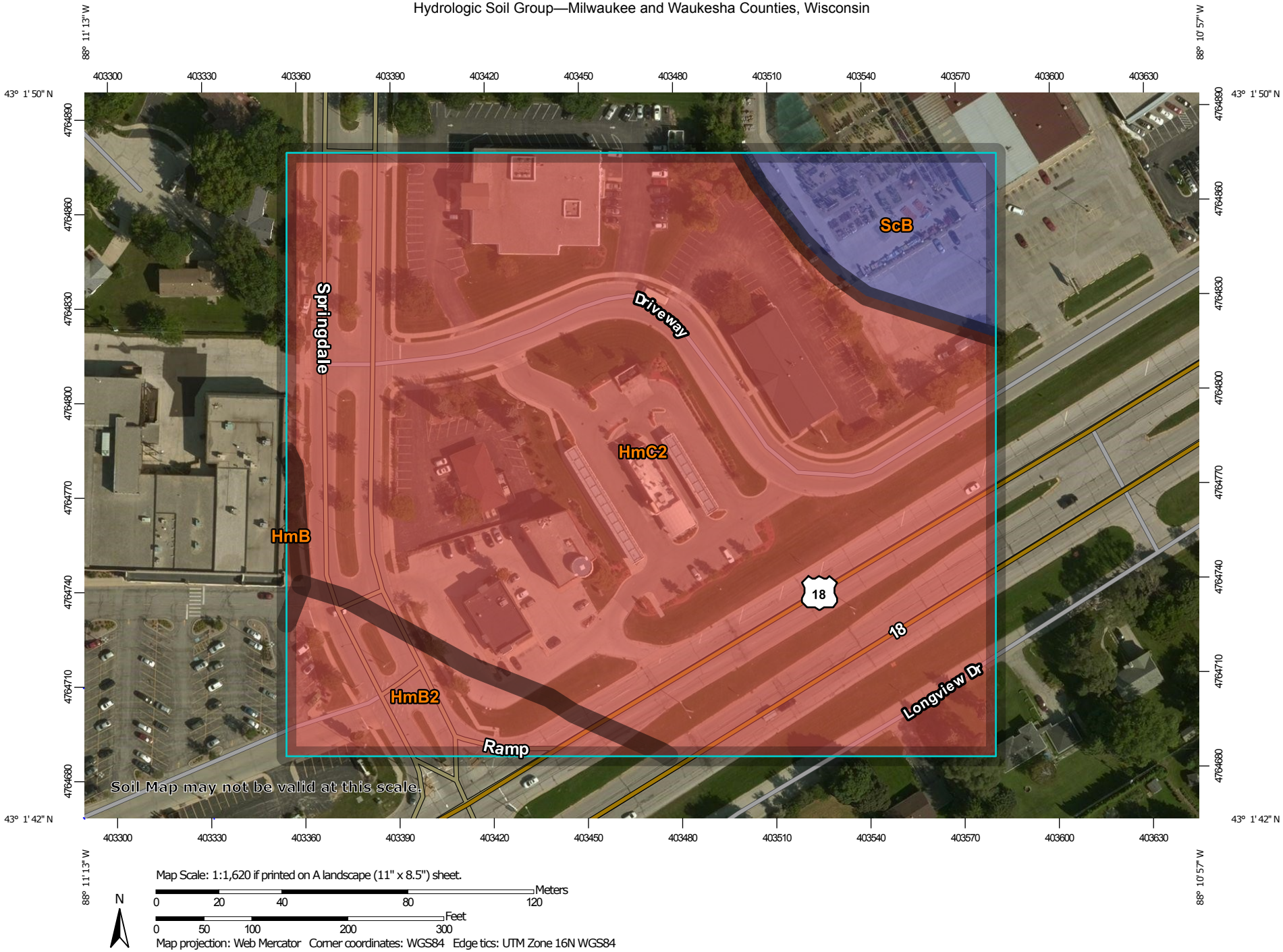
JSD PROJECT NO: 18-8469

File: I:\2018\18-8469\DWG\18-8469 Basemap.dwg Layout: ALTA User: jk Plotted: Apr 04, 2018 – 12:03pm Xref's:

APPENDIX 2

SOILS INFORMATION

USDA NRCS WEB SOIL SURVEY



Map Scale: 1:1,620 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 20 40 80 120

Feet: 0 50 100 200 300

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 16N WGS84

MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Rating Polygons

- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Lines

- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Points

- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Water Features

- Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Milwaukee and Waukesha Counties, Wisconsin
Survey Area Data: Version 13, Oct 6, 2017

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Sep 7, 2014—Sep 22, 2014

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
HmB	Hochheim loam, 2 to 6 percent slopes	D	0.0	0.4%
HmB2	Hochheim loam, 2 to 6 percent slopes, eroded	D	0.9	8.0%
HmC2	Hochheim loam, 6 to 12 percent slopes, eroded	D	9.0	84.2%
ScB	St. Charles silt loam, 2 to 6 percent slopes	B	0.8	7.4%
Totals for Area of Interest			**10.7**	**100.0%**

Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

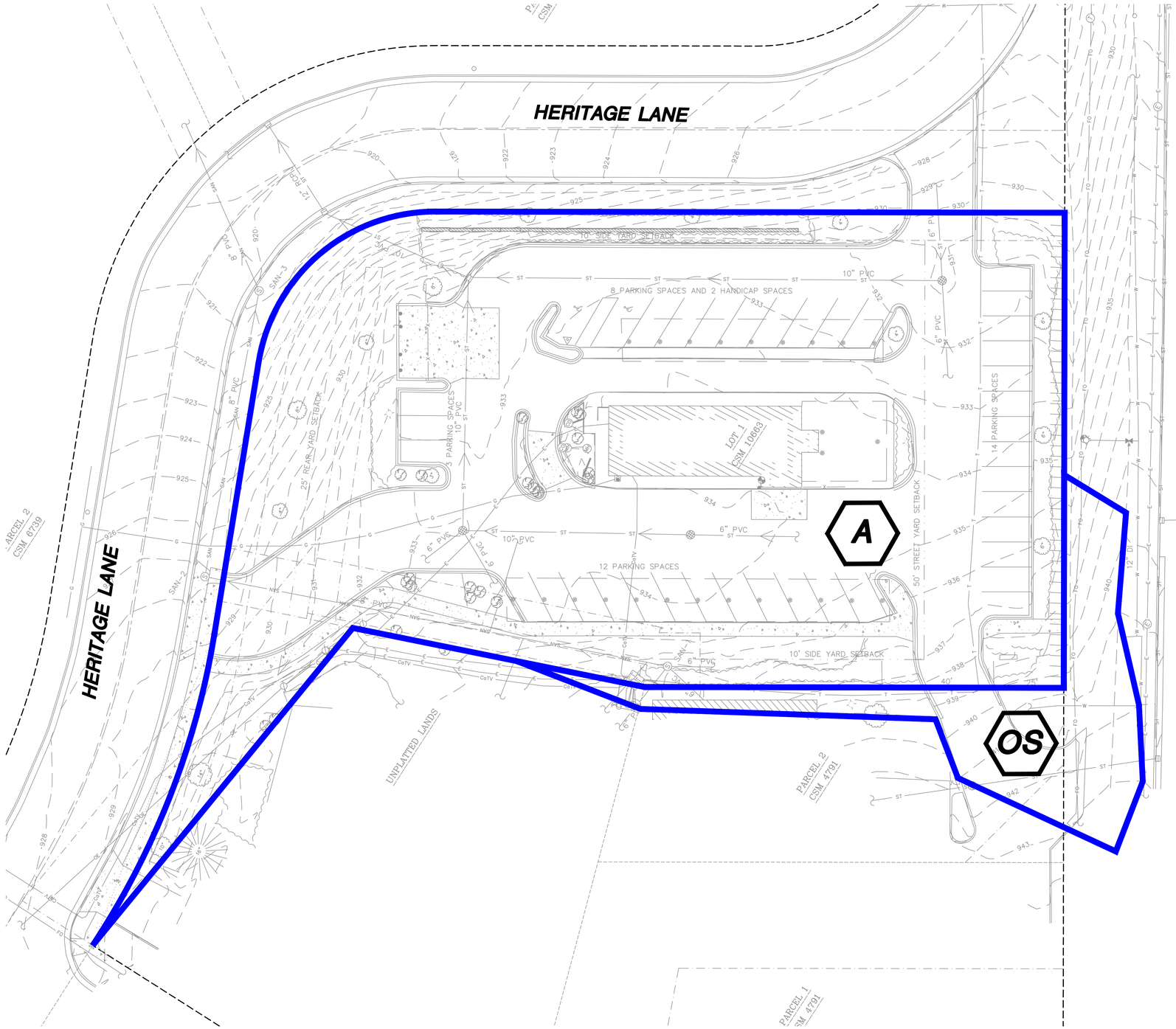
APPENDIX 3

PRELIMINARY PLANS

APPENDIX 4

PRE-DEVELOPMENT HYDROLOGIC CALCULATIONS

EXISTING WATERSHED MAP
PRE-DEVELOPMENT HYDROCAD OUTPUT



LEGEND (PROPOSED)

- PROPERTY LINE
- SETBACK LINE
- EASEMENT LINE
- BUILDING LINE
- BUILDING OVERHANG LINE
- EDGE OF CONCRETE
- STANDARD CURB AND GUTTER
- REJECT CURB AND GUTTER
- PROPOSED CONCRETE PAVEMENT
- PROPOSED HEAVY DUTY CONCRETE PAVEMENT
- PROPOSED ASPHALT PAVEMENT
- PROPOSED HEAVY DUTY ASPHALT PAVEMENT
- LIGHT POLE
- BOLLARD

WATERSHED CHARACTERISTICS

WATERSHED A
49,353 SF (66.4% IMPERVIOUS)
6 MINUTE TIME OF CONCENTRATION (MINIMUM)

WATERSHED OS
5663 SF (25.0% IMPERVIOUS)
6 MINUTE TIME OF CONCENTRATION (MINIMUM)

north

SCALE IN FEET
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P. 608.848.5060

CLIENT:
SUMMIT CREDIT UNION

CLIENT ADDRESS:
4800 American Parkway
MADISON, WI 53718

PROJECT:
SUMMIT CREDIT UNION - WAUKESHA BRANCH

PROJECT LOCATION:
2208 E MORELAND BOULEVARD
WAUKESHA COUNTY

PLAN MODIFICATIONS:

#	Date:	Description:
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		

Design/Drawn: CLH
Approved: WHD

SHEET TITLE:
EXISTING DRAINAGE AREA MAP

SHEET NUMBER:
EX1.0

JSD PROJECT NO: 18-8469

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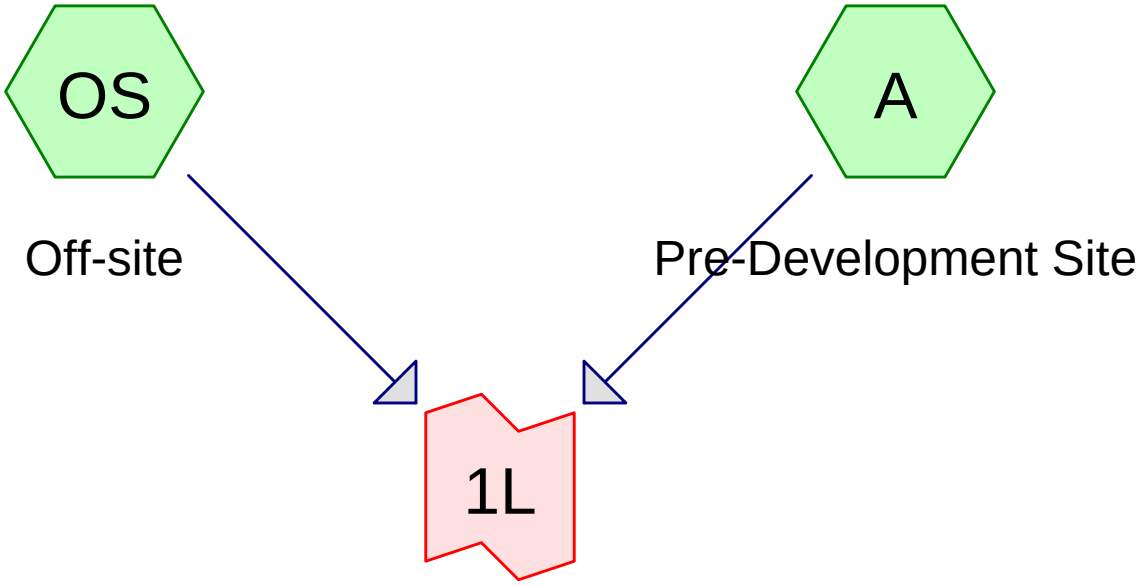


Subcat Reach Pond Link

Routing Diagram for Predevelopment
Prepared by Microsoft, Printed 4/6/2018

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.849	98	Impervious, HSG D (A, OS)
0.381	78	Pervious, HSG D (A)
0.033	78	Pervsious, HSG D (OS)
1.263	**91**	**TOTAL AREA**

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.000	HSG B	
0.000	HSG C	
1.263	HSG D	A, OS
0.000	Other	
1.263		**TOTAL AREA**

Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.000	0.000	0.000	0.849	0.000	0.849	Impervious	A, OS
0.000	0.000	0.000	0.381	0.000	0.381	Pervious	A
0.000	0.000	0.000	0.033	0.000	0.033	Pervsious	OS
0.000	**0.000**	**0.000**	**1.263**	**0.000**	**1.263**	**TOTAL AREA**	

Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Link 1L: Pre-Development Inflow=3.98 cfs 0.184 af
Primary=3.98 cfs 0.184 af

Subcatchment A: Pre-Development Site Runoff Area=49,353 sf 66.36% Impervious Runoff Depth>1.73"
Tc=6.0 min CN=91 Runoff=3.54 cfs 0.163 af

Subcatchment OS: Off-site Runoff Area=5,663 sf 75.00% Impervious Runoff Depth>1.90"
Tc=6.0 min CN=93 Runoff=0.44 cfs 0.021 af

Total Runoff Area = 1.263 ac Runoff Volume = 0.184 af Average Runoff Depth = 1.74"
32.75% Pervious = 0.414 ac 67.25% Impervious = 0.849 ac

Summary for Link 1L: Pre-Development

Inflow Area = 1.263 ac, 67.25% Impervious, Inflow Depth > 1.74" for 2-year event
Inflow = 3.98 cfs @ 12.13 hrs, Volume= 0.184 af
Primary = 3.98 cfs @ 12.13 hrs, Volume= 0.184 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Subcatchment A: Pre-Development Site

Runoff = 3.54 cfs @ 12.13 hrs, Volume= 0.163 af, Depth> 1.73"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 2-year Rainfall=2.70"

	Area (sf)	CN	Description
*	32,752	98	Impervious, HSG D
*	16,601	78	Pervious, HSG D
	49,353	91	Weighted Average
	16,601		33.64% Pervious Area
	32,752		66.36% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Minimum TC**

Summary for Subcatchment OS: Off-site

Runoff = 0.44 cfs @ 12.13 hrs, Volume= 0.021 af, Depth> 1.90"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 2-year Rainfall=2.70"

	Area (sf)	CN	Description
*	4,247	98	Impervious, HSG D
*	1,416	78	Pervsious, HSG D
	5,663	93	Weighted Average
	1,416		25.00% Pervious Area
	4,247		75.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Minimum TC**

Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Link 1L: Pre-Development Inflow=6.11 cfs 0.290 af
Primary=6.11 cfs 0.290 af

Subcatchment A: Pre-Development Site Runoff Area=49,353 sf 66.36% Impervious Runoff Depth>2.74"
Tc=6.0 min CN=91 Runoff=5.45 cfs 0.259 af

Subcatchment OS: Off-site Runoff Area=5,663 sf 75.00% Impervious Runoff Depth>2.94"
Tc=6.0 min CN=93 Runoff=0.66 cfs 0.032 af

Total Runoff Area = 1.263 ac Runoff Volume = 0.290 af Average Runoff Depth = 2.76"
32.75% Pervious = 0.414 ac 67.25% Impervious = 0.849 ac

Summary for Link 1L: Pre-Development

Inflow Area = 1.263 ac, 67.25% Impervious, Inflow Depth > 2.76" for 10-year event
Inflow = 6.11 cfs @ 12.13 hrs, Volume= 0.290 af
Primary = 6.11 cfs @ 12.13 hrs, Volume= 0.290 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Subcatchment A: Pre-Development Site

Runoff = 5.45 cfs @ 12.13 hrs, Volume= 0.259 af, Depth> 2.74"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 10-year Rainfall=3.81"

	Area (sf)	CN	Description
*	32,752	98	Impervious, HSG D
*	16,601	78	Pervious, HSG D
	49,353	91	Weighted Average
	16,601		33.64% Pervious Area
	32,752		66.36% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Minimum TC**

Summary for Subcatchment OS: Off-site

Runoff = 0.66 cfs @ 12.13 hrs, Volume= 0.032 af, Depth> 2.94"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 10-year Rainfall=3.81"

	Area (sf)	CN	Description
*	4,247	98	Impervious, HSG D
*	1,416	78	Pervsious, HSG D
	5,663	93	Weighted Average
	1,416		25.00% Pervious Area
	4,247		75.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Minimum TC**

Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Link 1L: Pre-Development Inflow=10.61 cfs 0.526 af
Primary=10.61 cfs 0.526 af

Subcatchment A: Pre-Development Site Runoff Area=49,353 sf 66.36% Impervious Runoff Depth>4.97"
Tc=6.0 min CN=91 Runoff=9.50 cfs 0.469 af

Subcatchment OS: Off-site Runoff Area=5,663 sf 75.00% Impervious Runoff Depth>5.19"
Tc=6.0 min CN=93 Runoff=1.11 cfs 0.056 af

Total Runoff Area = 1.263 ac Runoff Volume = 0.526 af Average Runoff Depth = 4.99"
32.75% Pervious = 0.414 ac 67.25% Impervious = 0.849 ac

Summary for Link 1L: Pre-Development

Inflow Area = 1.263 ac, 67.25% Impervious, Inflow Depth > 4.99" for 100-year event
Inflow = 10.61 cfs @ 12.13 hrs, Volume= 0.526 af
Primary = 10.61 cfs @ 12.13 hrs, Volume= 0.526 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Subcatchment A: Pre-Development Site

Runoff = 9.50 cfs @ 12.13 hrs, Volume= 0.469 af, Depth> 4.97"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 100-year Rainfall=6.18"

	Area (sf)	CN	Description
*	32,752	98	Impervious, HSG D
*	16,601	78	Pervious, HSG D
	49,353	91	Weighted Average
	16,601		33.64% Pervious Area
	32,752		66.36% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Minimum TC**

Summary for Subcatchment OS: Off-site

Runoff = 1.11 cfs @ 12.13 hrs, Volume= 0.056 af, Depth> 5.19"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 100-year Rainfall=6.18"

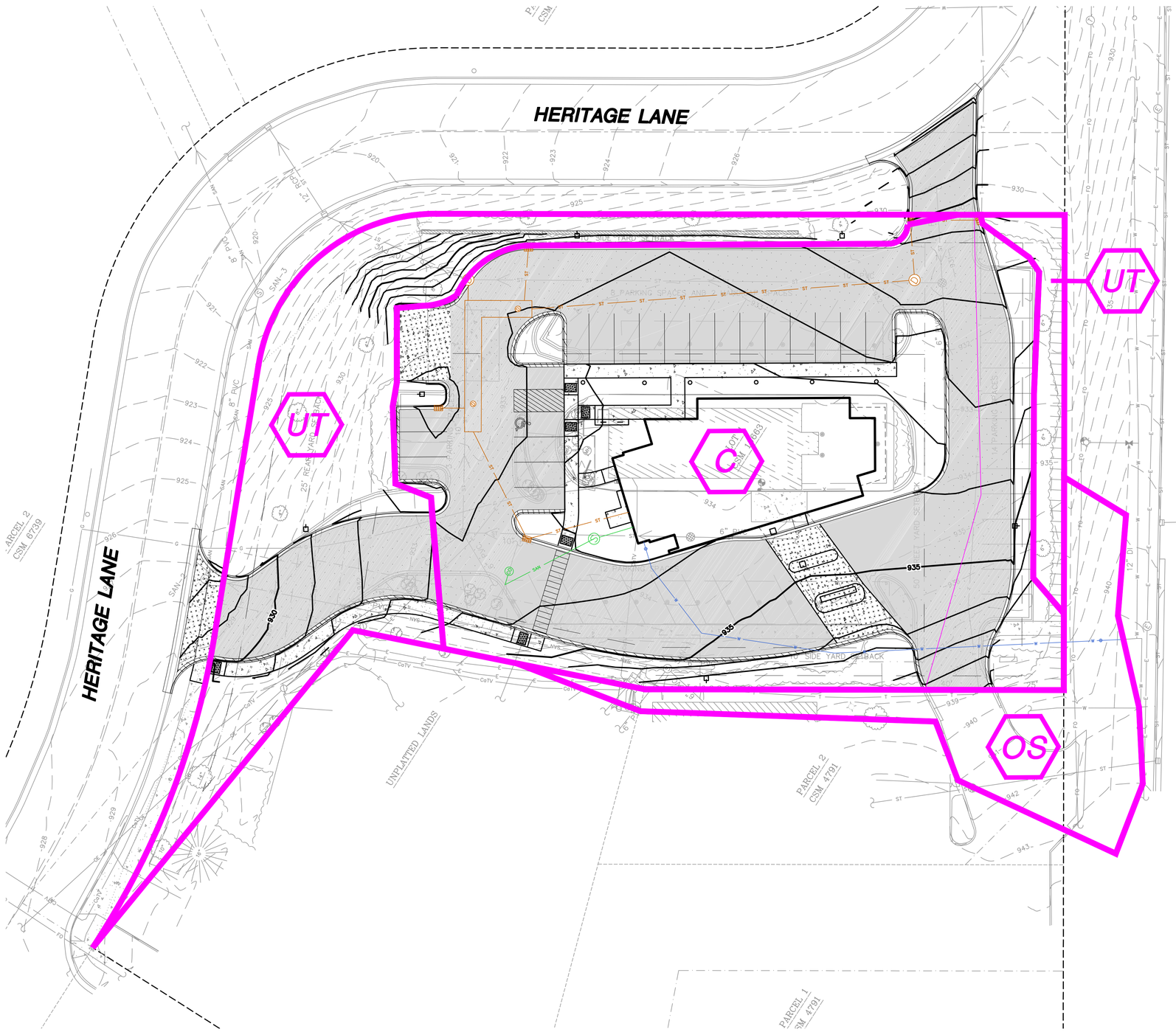
	Area (sf)	CN	Description
*	4,247	98	Impervious, HSG D
*	1,416	78	Pervsious, HSG D
	5,663	93	Weighted Average
	1,416		25.00% Pervious Area
	4,247		75.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Minimum TC**

APPENDIX 5

POST-DEVELOPMENT HYDROLOGIC CALCULATIONS

PROPOSED WATERSHED MAP
POST-DEVELOPMENT HYDROCAD OUTPUT



LEGEND (PROPOSED)

- PROPERTY LINE
- SETBACK LINE
- EASEMENT LINE
- BUILDING LINE
- BUILDING OVERHANG LINE
- EDGE OF CONCRETE
- STANDARD CURB AND GUTTER
- REJECT CURB AND GUTTER
- PROPOSED CONCRETE PAVEMENT
- PROPOSED HEAVY DUTY CONCRETE PAVEMENT
- PROPOSED ASPHALT PAVEMENT
- PROPOSED HEAVY DUTY ASPHALT PAVEMENT
- LIGHT POLE
- BOLLARD

WATERSHED CHARACTERISTICS

WATERSHED C
34,815 SF (57.0% IMPERVIOUS)
6 MINUTE TIME OF CONCENTRATION (MINIMUM)

WATERSHED UT
12,918 SF (57.0% IMPERVIOUS)
6 MINUTE TIME OF CONCENTRATION (MINIMUM)

WATERSHED OS
5663 SF (25.0% IMPERVIOUS)
6 MINUTE TIME OF CONCENTRATION (MINIMUM)

north

SCALE IN FEET
20' 0 20'

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P. 608.848.5060

CLIENT:
SUMMIT CREDIT UNION

CLIENT ADDRESS:
4800 American Parkway
MADISON, WI 53718

PROJECT:
SUMMIT CREDIT UNION - WAUKESHA BRANCH

PROJECT LOCATION:
2208 E MORELAND BOULEVARD
WAUKESHA COUNTY

PLAN MODIFICATIONS:

#	Date:	Description:
1	04.09.18	CITY PLAN REVIEW
2	05.14.18	CITY RESUBMITTAL
3		
4		
5		
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7		
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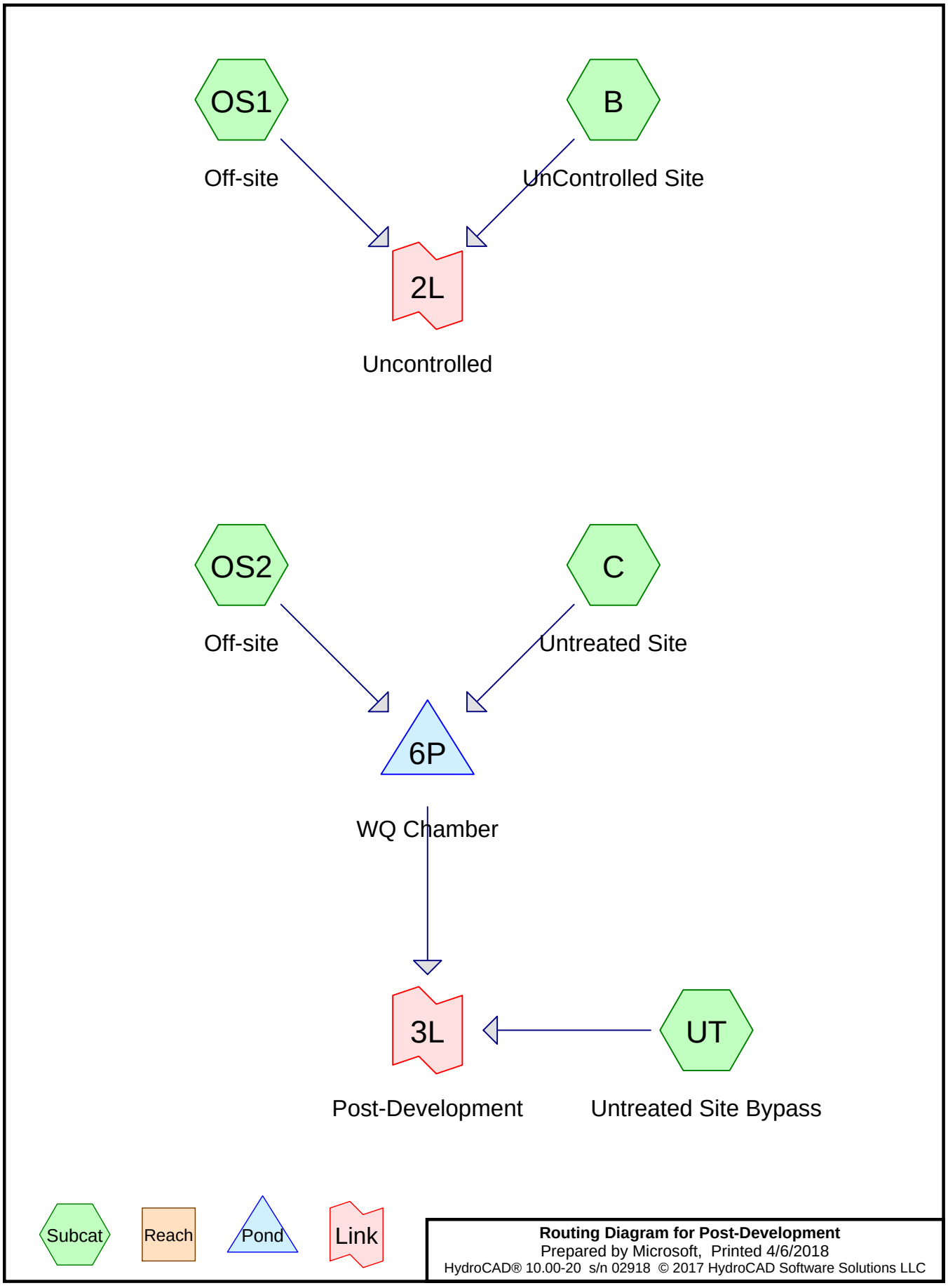
9		
10		
11		
12		
13		
14		
15		

Design/Drawn: CLH
Approved: WHD

SHEET TITLE:
PROPOSED DRAINAGE AREA MAP

SHEET NUMBER:
EX2.0

JSD PROJECT NO: 18-8469



Routing Diagram for Post-Development
Prepared by Microsoft, Printed 4/6/2018

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
1.439	98	Impervious, HSG D (B, C, OS1, OS2, UT)
1.022	78	Pervious, HSG D (B, C, UT)
0.065	78	Pervsious, HSG D (OS1, OS2)
2.526	**89**	**TOTAL AREA**

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.000	HSG B	
0.000	HSG C	
2.526	HSG D	B, C, OS1, OS2, UT
0.000	Other	
2.526		**TOTAL AREA**

Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.000	0.000	0.000	1.439	0.000	1.439	Impervious	B, C, OS1, OS2, UT
0.000	0.000	0.000	1.022	0.000	1.022	Pervious	B, C, UT
0.000	0.000	0.000	0.065	0.000	0.065	Pervsious	OS1, OS2
0.000	**0.000**	**0.000**	**2.526**	**0.000**	**2.526**	**TOTAL AREA**	

Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Link 2L: Uncontrolled Inflow=3.84 cfs 0.176 af
Primary=3.84 cfs 0.176 af

Link 3L: Post-Development Inflow=3.16 cfs 0.154 af
Primary=3.16 cfs 0.154 af

Pond 6P: WQ Chamber Peak Elev=927.42' Storage=0.031 af Inflow=2.72 cfs 0.124 af
12.0" Round Culvert n=0.011 L=8.0' S=0.0100 '/' Outflow=2.45 cfs 0.121 af

Subcatchment B: UnControlled Site Runoff Area=49,353 sf 62.45% Impervious Runoff Depth>1.65"
Tc=6.0 min CN=90 Runoff=3.40 cfs 0.155 af

Subcatchment C: Untreated Site Runoff Area=34,499 sf 57.01% Impervious Runoff Depth>1.57"
Tc=6.0 min CN=89 Runoff=2.28 cfs 0.103 af

Subcatchment OS1: Off-site Runoff Area=5,663 sf 75.00% Impervious Runoff Depth>1.90"
Tc=6.0 min CN=93 Runoff=0.44 cfs 0.021 af

Subcatchment OS2: Off-site Runoff Area=5,663 sf 75.00% Impervious Runoff Depth>1.90"
Tc=6.0 min CN=93 Runoff=0.44 cfs 0.021 af

Subcatchment UT: Untreated Site Bypass Runoff Area=0.341 ac 24.93% Impervious Runoff Depth>1.15"
Tc=6.0 min CN=83 Runoff=0.74 cfs 0.033 af

Total Runoff Area = 2.526 ac Runoff Volume = 0.333 af Average Runoff Depth = 1.58"
43.03% Pervious = 1.087 ac 56.97% Impervious = 1.439 ac

Summary for Link 2L: Uncontrolled

Inflow Area = 1.263 ac, 63.74% Impervious, Inflow Depth > 1.67" for 2-year event
Inflow = 3.84 cfs @ 12.13 hrs, Volume= 0.176 af
Primary = 3.84 cfs @ 12.13 hrs, Volume= 0.176 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Link 3L: Post-Development

Inflow Area = 1.263 ac, 50.20% Impervious, Inflow Depth > 1.46" for 2-year event
Inflow = 3.16 cfs @ 12.15 hrs, Volume= 0.154 af
Primary = 3.16 cfs @ 12.15 hrs, Volume= 0.154 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Pond 6P: WQ Chamber

Inflow Area = 0.922 ac, 59.55% Impervious, Inflow Depth > 1.61" for 2-year event
Inflow = 2.72 cfs @ 12.13 hrs, Volume= 0.124 af
Outflow = 2.45 cfs @ 12.16 hrs, Volume= 0.121 af, Atten= 10%, Lag= 1.9 min
Primary = 2.45 cfs @ 12.16 hrs, Volume= 0.121 af

Routing by Dyn-Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Starting Elev= 926.00' Surf.Area= 0.009 ac Storage= 0.019 af
Peak Elev= 927.42' @ 12.16 hrs Surf.Area= 0.008 ac Storage= 0.031 af (0.012 af above start)

Plug-Flow detention time= 66.7 min calculated for 0.102 af (82% of inflow)
Center-of-Mass det. time= 8.2 min (782.6 - 774.4)

Volume	Invert	Avail.Storage	Storage Description
#1	923.25'	0.042 af	**72.0" Round Pipe Storage** L= 65.0'

Device	Routing	Invert	Outlet Devices
#1	Primary	926.25'	**12.0" Round Culvert** L= 8.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 926.25' / 926.17' S= 0.0100 '/' Cc= 0.900 n= 0.011, Flow Area= 0.79 sf

Primary OutFlow Max=2.39 cfs @ 12.16 hrs HW=927.39' TW=0.00' (Dynamic Tailwater)
1=Culvert (Inlet Controls 2.39 cfs @ 3.05 fps)

Summary for Subcatchment B: UnControlled Site

Runoff = 3.40 cfs @ 12.13 hrs, Volume= 0.155 af, Depth> 1.65"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 2-year Rainfall=2.70"

	Area (sf)	CN	Description
*	30,820	98	Impervious, HSG D
*	18,533	78	Pervious, HSG D
	49,353	90	Weighted Average
	18,533		37.55% Pervious Area
	30,820		62.45% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Minimum TC**

Summary for Subcatchment C: Untreated Site

Runoff = 2.28 cfs @ 12.13 hrs, Volume= 0.103 af, Depth> 1.57"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 2-year Rainfall=2.70"

	Area (sf)	CN	Description
*	19,669	98	Impervious, HSG D
*	14,830	78	Pervious, HSG D
	34,499	89	Weighted Average
	14,830		42.99% Pervious Area
	19,669		57.01% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Minimum TC**

Summary for Subcatchment OS1: Off-site

Runoff = 0.44 cfs @ 12.13 hrs, Volume= 0.021 af, Depth> 1.90"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 2-year Rainfall=2.70"

	Area (sf)	CN	Description
*	4,247	98	Impervious, HSG D
*	1,416	78	Pervsious, HSG D
	5,663	93	Weighted Average
	1,416		25.00% Pervious Area
	4,247		75.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Minimum TC**

Summary for Subcatchment OS2: Off-site

Runoff = 0.44 cfs @ 12.13 hrs, Volume= 0.021 af, Depth> 1.90"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 2-year Rainfall=2.70"

	Area (sf)	CN	Description
*	4,247	98	Impervious, HSG D
*	1,416	78	Pervsious, HSG D
	5,663	93	Weighted Average
	1,416		25.00% Pervious Area
	4,247		75.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Minimum TC**

Summary for Subcatchment UT: Untreated Site Bypass

Runoff = 0.74 cfs @ 12.14 hrs, Volume= 0.033 af, Depth> 1.15"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 2-year Rainfall=2.70"

	Area (ac)	CN	Description
*	0.256	78	Pervious, HSG D
*	0.085	98	Impervious, HSG D
	0.341	83	Weighted Average
	0.256		75.07% Pervious Area
	0.085		24.93% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Minimum TC**

Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Link 2L: Uncontrolled Inflow=5.97 cfs 0.281 af
Primary=5.97 cfs 0.281 af

Link 3L: Post-Development Inflow=4.83 cfs 0.255 af
Primary=4.83 cfs 0.255 af

Pond 6P: WQ Chamber Peak Elev=928.21' Storage=0.037 af Inflow=4.27 cfs 0.200 af
12.0" Round Culvert n=0.011 L=8.0' S=0.0100 '/' Outflow=3.62 cfs 0.197 af

Subcatchment B: UnControlled Site Runoff Area=49,353 sf 62.45% Impervious Runoff Depth>2.64"
Tc=6.0 min CN=90 Runoff=5.32 cfs 0.250 af

Subcatchment C: Untreated Site Runoff Area=34,499 sf 57.01% Impervious Runoff Depth>2.55"
Tc=6.0 min CN=89 Runoff=3.62 cfs 0.168 af

Subcatchment OS1: Off-site Runoff Area=5,663 sf 75.00% Impervious Runoff Depth>2.94"
Tc=6.0 min CN=93 Runoff=0.66 cfs 0.032 af

Subcatchment OS2: Off-site Runoff Area=5,663 sf 75.00% Impervious Runoff Depth>2.94"
Tc=6.0 min CN=93 Runoff=0.66 cfs 0.032 af

Subcatchment UT: Untreated Site Bypass Runoff Area=0.341 ac 24.93% Impervious Runoff Depth>2.03"
Tc=6.0 min CN=83 Runoff=1.29 cfs 0.058 af

Total Runoff Area = 2.526 ac Runoff Volume = 0.539 af Average Runoff Depth = 2.56"
43.03% Pervious = 1.087 ac 56.97% Impervious = 1.439 ac

Summary for Link 2L: Uncontrolled

Inflow Area = 1.263 ac, 63.74% Impervious, Inflow Depth > 2.67" for 10-year event
Inflow = 5.97 cfs @ 12.13 hrs, Volume= 0.281 af
Primary = 5.97 cfs @ 12.13 hrs, Volume= 0.281 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Link 3L: Post-Development

Inflow Area = 1.263 ac, 50.20% Impervious, Inflow Depth > 2.42" for 10-year event
Inflow = 4.83 cfs @ 12.15 hrs, Volume= 0.255 af
Primary = 4.83 cfs @ 12.15 hrs, Volume= 0.255 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Pond 6P: WQ Chamber

Inflow Area = 0.922 ac, 59.55% Impervious, Inflow Depth > 2.60" for 10-year event
Inflow = 4.27 cfs @ 12.13 hrs, Volume= 0.200 af
Outflow = 3.62 cfs @ 12.17 hrs, Volume= 0.197 af, Atten= 15%, Lag= 2.4 min
Primary = 3.62 cfs @ 12.17 hrs, Volume= 0.197 af

Routing by Dyn-Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Starting Elev= 926.00' Surf.Area= 0.009 ac Storage= 0.019 af
Peak Elev= 928.21' @ 12.17 hrs Surf.Area= 0.007 ac Storage= 0.037 af (0.018 af above start)

Plug-Flow detention time= 51.8 min calculated for 0.178 af (89% of inflow)
Center-of-Mass det. time= 7.3 min (773.7 - 766.4)

Volume	Invert	Avail.Storage	Storage Description
#1	923.25'	0.042 af	**72.0" Round Pipe Storage** L= 65.0'

Device	Routing	Invert	Outlet Devices
#1	Primary	926.25'	**12.0" Round Culvert** L= 8.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 926.25' / 926.17' S= 0.0100 '/' Cc= 0.900 n= 0.011, Flow Area= 0.79 sf

Primary OutFlow Max=3.54 cfs @ 12.17 hrs HW=928.15' TW=0.00' (Dynamic Tailwater)
1=Culvert (Inlet Controls 3.54 cfs @ 4.50 fps)

Summary for Subcatchment B: UnControlled Site

Runoff = 5.32 cfs @ 12.13 hrs, Volume= 0.250 af, Depth> 2.64"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 10-year Rainfall=3.81"

	Area (sf)	CN	Description
*	30,820	98	Impervious, HSG D
*	18,533	78	Pervious, HSG D
	49,353	90	Weighted Average
	18,533		37.55% Pervious Area
	30,820		62.45% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Minimum TC**

Summary for Subcatchment C: Untreated Site

Runoff = 3.62 cfs @ 12.13 hrs, Volume= 0.168 af, Depth> 2.55"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 10-year Rainfall=3.81"

	Area (sf)	CN	Description
*	19,669	98	Impervious, HSG D
*	14,830	78	Pervious, HSG D
	34,499	89	Weighted Average
	14,830		42.99% Pervious Area
	19,669		57.01% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Minimum TC**

Summary for Subcatchment OS1: Off-site

Runoff = 0.66 cfs @ 12.13 hrs, Volume= 0.032 af, Depth> 2.94"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 10-year Rainfall=3.81"

	Area (sf)	CN	Description
*	4,247	98	Impervious, HSG D
*	1,416	78	Pervsious, HSG D
	5,663	93	Weighted Average
	1,416		25.00% Pervious Area
	4,247		75.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Minimum TC**

Summary for Subcatchment OS2: Off-site

Runoff = 0.66 cfs @ 12.13 hrs, Volume= 0.032 af, Depth> 2.94"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 10-year Rainfall=3.81"

	Area (sf)	CN	Description
*	4,247	98	Impervious, HSG D
*	1,416	78	Pervsious, HSG D
	5,663	93	Weighted Average
	1,416		25.00% Pervious Area
	4,247		75.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Minimum TC**

Summary for Subcatchment UT: Untreated Site Bypass

Runoff = 1.29 cfs @ 12.13 hrs, Volume= 0.058 af, Depth> 2.03"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 10-year Rainfall=3.81"

	Area (ac)	CN	Description
*	0.256	78	Pervious, HSG D
*	0.085	98	Impervious, HSG D
	0.341	83	Weighted Average
	0.256		75.07% Pervious Area
	0.085		24.93% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Minimum TC**

Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Link 2L: Uncontrolled Inflow=10.49 cfs 0.515 af
Primary=10.49 cfs 0.515 af

Link 3L: Post-Development Inflow=10.71 cfs 0.483 af
Primary=10.71 cfs 0.483 af

Pond 6P: WQ Chamber Peak Elev=934.26' Storage=0.042 af Inflow=7.58 cfs 0.370 af
12.0" Round Culvert n=0.011 L=8.0' S=0.0100 '/' Outflow=8.22 cfs 0.366 af

Subcatchment B: UnControlled Site Runoff Area=49,353 sf 62.45% Impervious Runoff Depth>4.86"
Tc=6.0 min CN=90 Runoff=9.38 cfs 0.459 af

Subcatchment C: Untreated Site Runoff Area=34,499 sf 57.01% Impervious Runoff Depth>4.75"
Tc=6.0 min CN=89 Runoff=6.46 cfs 0.313 af

Subcatchment OS1: Off-site Runoff Area=5,663 sf 75.00% Impervious Runoff Depth>5.19"
Tc=6.0 min CN=93 Runoff=1.11 cfs 0.056 af

Subcatchment OS2: Off-site Runoff Area=5,663 sf 75.00% Impervious Runoff Depth>5.19"
Tc=6.0 min CN=93 Runoff=1.11 cfs 0.056 af

Subcatchment UT: Untreated Site Bypass Runoff Area=0.341 ac 24.93% Impervious Runoff Depth>4.10"
Tc=6.0 min CN=83 Runoff=2.51 cfs 0.117 af

Total Runoff Area = 2.526 ac Runoff Volume = 1.001 af Average Runoff Depth = 4.76"
43.03% Pervious = 1.087 ac 56.97% Impervious = 1.439 ac

Summary for Link 2L: Uncontrolled

Inflow Area = 1.263 ac, 63.74% Impervious, Inflow Depth > 4.89" for 100-year event
Inflow = 10.49 cfs @ 12.13 hrs, Volume= 0.515 af
Primary = 10.49 cfs @ 12.13 hrs, Volume= 0.515 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Link 3L: Post-Development

Inflow Area = 1.263 ac, 50.20% Impervious, Inflow Depth > 4.59" for 100-year event
Inflow = 10.71 cfs @ 12.14 hrs, Volume= 0.483 af
Primary = 10.71 cfs @ 12.14 hrs, Volume= 0.483 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Pond 6P: WQ Chamber

Inflow Area = 0.922 ac, 59.55% Impervious, Inflow Depth > 4.81" for 100-year event
Inflow = 7.58 cfs @ 12.13 hrs, Volume= 0.370 af
Outflow = 8.22 cfs @ 12.14 hrs, Volume= 0.366 af, Atten= 0%, Lag= 0.8 min
Primary = 8.22 cfs @ 12.14 hrs, Volume= 0.366 af

Routing by Dyn-Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Starting Elev= 926.00' Surf.Area= 0.009 ac Storage= 0.019 af
Peak Elev= 934.26' @ 12.14 hrs Surf.Area= 0.000 ac Storage= 0.042 af (0.023 af above start)

Plug-Flow detention time= 37.7 min calculated for 0.347 af (94% of inflow)
Center-of-Mass det. time= 6.0 min (761.9 - 755.8)

Volume	Invert	Avail.Storage	Storage Description
#1	923.25'	0.042 af	**72.0" Round Pipe Storage** L= 65.0'

Device	Routing	Invert	Outlet Devices
#1	Primary	926.25'	**12.0" Round Culvert** L= 8.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 926.25' / 926.17' S= 0.0100 '/' Cc= 0.900 n= 0.011, Flow Area= 0.79 sf

Primary OutFlow Max=7.85 cfs @ 12.14 hrs HW=933.67' TW=0.00' (Dynamic Tailwater)
1=Culvert (Inlet Controls 7.85 cfs @ 10.00 fps)

Summary for Subcatchment B: UnControlled Site

Runoff = 9.38 cfs @ 12.13 hrs, Volume= 0.459 af, Depth> 4.86"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 100-year Rainfall=6.18"

	Area (sf)	CN	Description
*	30,820	98	Impervious, HSG D
*	18,533	78	Pervious, HSG D
	49,353	90	Weighted Average
	18,533		37.55% Pervious Area
	30,820		62.45% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Minimum TC**

Summary for Subcatchment C: Untreated Site

Runoff = 6.46 cfs @ 12.13 hrs, Volume= 0.313 af, Depth> 4.75"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 100-year Rainfall=6.18"

	Area (sf)	CN	Description
*	19,669	98	Impervious, HSG D
*	14,830	78	Pervious, HSG D
	34,499	89	Weighted Average
	14,830		42.99% Pervious Area
	19,669		57.01% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Minimum TC**

Summary for Subcatchment OS1: Off-site

Runoff = 1.11 cfs @ 12.13 hrs, Volume= 0.056 af, Depth> 5.19"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 100-year Rainfall=6.18"

	Area (sf)	CN	Description
*	4,247	98	Impervious, HSG D
*	1,416	78	Pervsious, HSG D
	5,663	93	Weighted Average
	1,416		25.00% Pervious Area
	4,247		75.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Minimum TC**

Summary for Subcatchment OS2: Off-site

Runoff = 1.11 cfs @ 12.13 hrs, Volume= 0.056 af, Depth> 5.19"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 100-year Rainfall=6.18"

	Area (sf)	CN	Description
*	4,247	98	Impervious, HSG D
*	1,416	78	Pervsious, HSG D
	5,663	93	Weighted Average
	1,416		25.00% Pervious Area
	4,247		75.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Minimum TC**

Summary for Subcatchment UT: Untreated Site Bypass

Runoff = 2.51 cfs @ 12.13 hrs, Volume= 0.117 af, Depth> 4.10"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 100-year Rainfall=6.18"

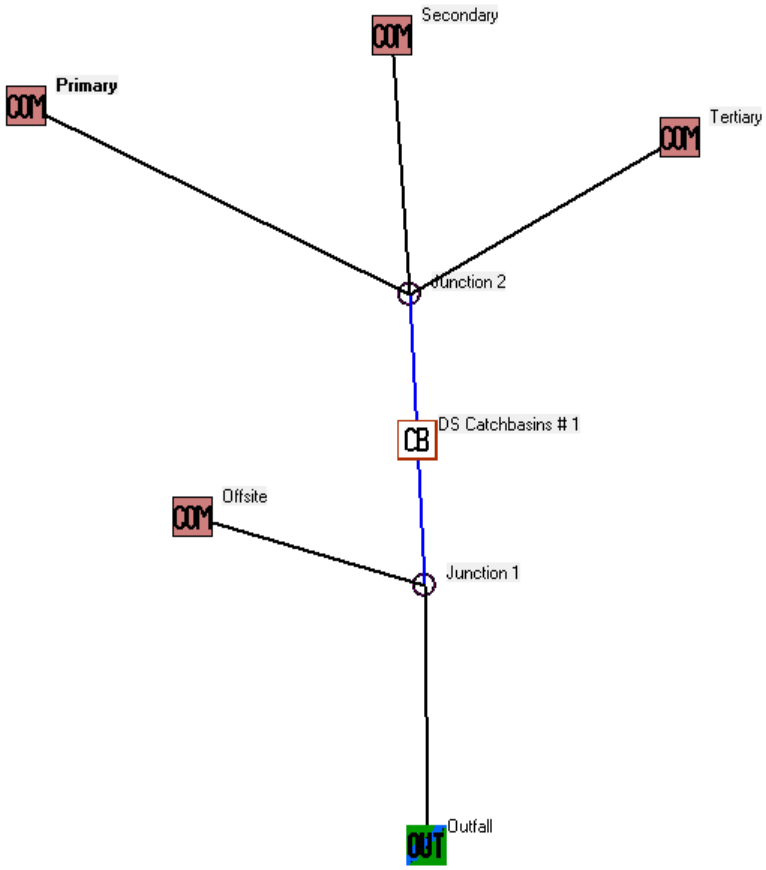
	Area (ac)	CN	Description
*	0.256	78	Pervious, HSG D
*	0.085	98	Impervious, HSG D
	0.341	83	Weighted Average
	0.256		75.07% Pervious Area
	0.085		24.93% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Minimum TC**

APPENDIX 6

SEDIMENT CALCULATIONS

WINSLAMM DIAGRAM
WINSLAMM INPUT
WINSLAMM OUTPUT


Secondary
COM
Primary
COM
Tertiary
COM
Junction 2
DS Catchbasins # 1
CB
Offsite
COM
Junction 1
Outfall
OUT

Data file name: I:\2018\188469\Civil\SWMP\Modeling\Slamm\TSS Calculations.mdb
WinSLAMM Version 10.3.4
Rain file name: C:\WinSLAMM Files\Rain Files\WisReg - Madison WI 1981.RAN
Particulate Solids Concentration file name: C:\WinSLAMM Files\v10.1 WI_AVG01.pscx
Runoff Coefficient file name: C:\WinSLAMM Files\WI_SL06 Dec06.rsvx
Residential Street Delivery file name: C:\WinSLAMM Files\WI_Res and Other Urban Dec06.std
Institutional Street Delivery file name: C:\WinSLAMM Files\WI_Com Inst Indust Dec06.std
Commercial Street Delivery file name: C:\WinSLAMM Files\WI_Com Inst Indust Dec06.std
Industrial Street Delivery file name: C:\WinSLAMM Files\WI_Com Inst Indust Dec06.std
Other Urban Street Delivery file name: C:\WinSLAMM Files\WI_Res and Other Urban Dec06.std
Freeway Street Delivery file name: C:\WinSLAMM Files\Freeway Dec06.std
Apply Street Delivery Files to Adjust the After Event Load Street Dirt Mass Balance: False
Pollutant Relative Concentration file name: C:\WinSLAMM Files\WI_GEO03.ppdx
Source Area PSD and Peak to Average Flow Ratio File: C:\WinSLAMM Files\NURP Source Area PSD Files.csv
Cost Data file name:
Seed for random number generator: -42
Study period starting date: 01/01/81 Study period ending date: 12/31/81
Start of Winter Season: 12/02 End of Winter Season: 03/12
Date: 04-06-2018 Time: 10:44:20
Site information:

LU# 1 - Commercial: Primary Total area (ac): 0.340
  13 - Paved Parking 1: 0.082 ac. Connected Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
  25 - Driveways 1: 0.126 ac. Connected Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
  26 - Driveways 2: 0.018 ac. Connected Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
  31 - Sidewalks 1: 0.007 ac. Connected Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
  32 - Sidewalks 2: 0.003 ac. Connected Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
  51 - Small Landscaped Areas 1: 0.093 ac. Normal Clayey Low Density Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
  52 - Small Landscaped Areas 2: 0.011 ac. Normal Clayey Low Density Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

LU# 2 - Commercial: Offsite Total area (ac): 0.341
  13 - Paved Parking 1: 0.008 ac. Connected Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
  25 - Driveways 1: 0.044 ac. Connected Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
  26 - Driveways 2: 0.022 ac. Connected Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
  31 - Sidewalks 1: 0.008 ac. Connected Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
  32 - Sidewalks 2: 0.003 ac. Connected Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
  51 - Small Landscaped Areas 1: 0.250 ac. Normal Clayey Low Density Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
  52 - Small Landscaped Areas 2: 0.006 ac. Normal Clayey Low Density Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

LU# 3 - Commercial: Secondary Total area (ac): 0.317

1 - Roofs 1: 0.078 ac. Flat Connected Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

13 - Paved Parking 1: 0.067 ac. Connected Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

25 - Driveways 1: 0.107 ac. Connected Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

31 - Sidewalks 1: 0.010 ac. Connected Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

51 - Small Landscaped Areas 1: 0.055 ac. Normal Clayey Low Density Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

LU# 4 - Commercial: Tertiary Total area (ac): 0.135

13 - Paved Parking 1: 0.108 ac. Connected Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

31 - Sidewalks 1: 0.010 ac. Connected Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

51 - Small Landscaped Areas 1: 0.017 ac. Normal Clayey Low Density Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

Control Practice 1: Catchbasin Cleaning CP# 1 (DS) - DS Catchbasins # 1

1. Fraction of area served by catchbasins = 1.00
2. Number of catchbasins = 1
3. Average sump depth below catchbasin outlet invert (feet) = 3
4. Depth of sediment in catchbasin sump at beginning of study period (ft) = 0
5. Typical outlet pipe diameter (ft) = 1
6. Typical outlet pipe Mannings n = 0.012
7. Typical outlet pipe slope (ft/ft) = 0.01
8. Typical catchbasin sump surface area (square feet) = 390
9. Total catchbasin depth (feet) = 8
10. Inflow hydrograph peak to average flow ratio = 3.8
11. Leakage rate through sump bottom (in/hr) = 0
12. Catchbasin Critical Particle Size File Name: Not needed - calculated by program

SLAMM for Windows Version 10.3.4

Data file name: I:\2018\188469\Civil\SWMP\Modeling\Slamm\TSS Calculations.mdb
Data file description:
Rain file name: C:\WinSLAMM Files\Rain Files\WisReg - Madison WI 1981.RAN
Particulate Solids Concentration file name: C:\WinSLAMM Files\v10.1 WI_AVG01.pscx
Runoff Coefficient file name: C:\WinSLAMM Files\WI_SL06 Dec06.rsvx
Residential Street Delivery file name: C:\WinSLAMM Files\WI_Res and Other Urban Dec06.std
Institutional Street Delivery file name: C:\WinSLAMM Files\WI_Com Inst Indust Dec06.std
Commercial Street Delivery file name: C:\WinSLAMM Files\WI_Com Inst Indust Dec06.std
Industrial Street Delivery file name: C:\WinSLAMM Files\WI_Com Inst Indust Dec06.std
Other Urban Street Delivery file name: C:\WinSLAMM Files\WI_Res and Other Urban Dec06.std
Freeway Street Delivery file name: C:\WinSLAMM Files\Freeway Dec06.std
Pollutant Relative Concentration file name: C:\WinSLAMM Files\WI_GEO03.ppdx
Start of Winter Season: 12/02 End of Winter Season: 03/12
Model Run Start Date: 01/01/81 Model Run End Date: 12/31/81
Date of run: 04-06-2018 Time of run: 10:43:12
Total Area Modeled (acres): 1.133
Years in Model Run: 1.00

	Runoff Volume (cu ft)	Percent Runoff Volume Reduction	Particulate Solids Conc. (mg/L)	Particulate Solids Yield (lbs)	Percent Particulate Solids Reduction
Total of all Land Uses without Controls:	56938	-	132.3	470.1	-
Outfall Total with Controls:	56937	0.00%	78.65	279.6	40.52%
Annualized Total After Outfall Controls:	57093			280.3	

APPENDIX 7

STORM SEWER SIZING CALCULATIONS

STORM SEWER SYSTEM CALCULATIONS

STORM SEWER SIZING CALCULATIONS - 10 YEAR STORM

PIPE	Pipe Run		Manhole Size	Length	Pipe Diameter	Slope	Pipe Material	Mannings (n)	Pipe Area	Hydraulic Radius	DA	Drainage Areas			Runoff Coef.	Upstream End	Area x C		Time of Conc.		Rainfall Intensity	Design Storm Event	Total Runoff	Design Capacity	Percent Full	Velocity Full	Downstream I.E.	Upstream I.E.	Upstream T/P Elev.	Pipe Cover	Upstream Rim Elev.	Upstream HGL Cover	Comments
	From	To	(in.)	(ft.)	(inches)	(%)			(sq. ft.)	(ft.)		Imp. (acres)	Perv. (acres)	Total (acres)	C	(Y/N)	Increment	Total	To Structure (min.)	Pipe (min.)	(in/hr)		(cfs)	(cfs)	(%)	(ft/sec)	(ft.)	(ft.)	(ft.)	(ft.)	(ft.)	(ft)	
P-1	STO INL-1	STO INL-2	2x3	23	10	0.25	PVC	0.010	0.55	0.21	P-1	0.155	0.166	0.321	0.59	Y	0.19	0.19	6.0	0.15	6.68	10	1.26	1.43	88.5%	2.62	927.88	927.94	928.85	1.92	930.77		
P-2	STO INL-2	STO MH 1	2x3	20	12	0.40	PVC	0.010	0.79	0.25	INL 2	0.092	0.024	0.116	0.80	N	0.09	0.28	6.1	0.09	6.68	10	1.89	2.94	64.3%	3.74	927.70	927.78	928.86	1.19	930.05		
P-3	STO MH 1	WQ Chamber	36	137	12	0.98	PVC	0.010	0.79	0.25						N	0.00	0.28	6.2	0.39	6.68	10	1.89	4.61	41.0%	5.87	926.25	927.60	928.68	3.27	931.95		
P-4	STO INL-3	WQ Chamber	2x3	19	6	5.00	PVC	0.010	0.20	0.13	INL 3	0.079	0.011	0.090	0.86	Y	0.08	0.08	6.0	0.04	6.68	10	0.52	1.64	31.9%	8.33	928.75	929.70	930.28	3.27	933.55		
P-5	STO INL-4	WQ Chamber	2x3	15	6	5.00	PVC	0.010	0.20	0.13	INL 4	0.098	0.024	0.122	0.81	Y	0.10	0.10	6.0	0.03	6.68	10	0.66	1.64	40.4%	8.33	928.75	929.50	930.08	3.96	934.04		
P-8	RD	STO INL-6	-	37	6	5.00	PVC	0.010	0.20	0.13	RD	0.000	0.090	0.090	0.25	Y	0.02	0.02	6.0	0.07	6.68	10	0.15	1.64	9.2%	8.33	931.05	932.90	933.48	3.72	937.20		
P-7	STO INL-6	STO INL-5	2x3	10	6	5.00	PVC	0.010	0.20	0.13						N	0.00	0.02	6.0	0.02	6.68	10	0.15	1.64	9.2%	8.33	930.45	930.95	931.53	2.49	934.02		
P-6	STO INL-5	WQ Chamber	2x3	32	6	5.00	PVC	0.010	0.20	0.13	INL 5	0.153	0.029	0.182	0.84	N	0.15	0.18	6.0	0.06	6.68	10	1.17	1.64	71.7%	8.33	928.75	930.35	930.93	3.50	934.43		
P-9	WQ Chamber	STO MH 2	-	8	12	1.00	PVC	0.010	0.79	0.25	HYDROCAD MODEL																926.17	926.25	927.33	7.27	934.60		

APPENDIX 7

USLE INFORMATION

Soil Loss & Sediment Discharge Calculation Tool

for use on Construction Sites in the State of Wisconsin

WDNR Official Version 1.0 (05-15-2015)

YEAR 1

Developer: Summit Credit Union

Project: Summit Credit Union - Waukesha Branch

Date: 4/6/2018

County: Waukesha

Version 1.0

Activity	Begin Date	End Date	Period % R	Annual R Factor	Sub Soil Texture	Soil Erodibility K Factor	Slope (%)	Slope Length (feet)	LS Factor	Land Cover C Factor	Soil loss A (tons/acre)	Sediment Control Practice	Sediment Discharge (tons/acre)
Bare Ground	4/29/2019	5/10/2019	3.6%	130	Clay	0.32	40.0%	32	8.20	1.00	12.2	Silt Fence	4.3
Mulch or Erosion Mat	5/10/2019	10/15/2019	81.8%	130	Clay	0.32	40.0%	95	14.13	0.20	96.2	Sediment Basin	0.0
End	10/15/2019	-----	-----	-----	-------	-----			-----	------	-----		0.0
		-----	-----	-----	-------	-----			-----	-----	-----		0.0
		-----	-----	-----	-------	-----			-----	-----	-----		0.0
		-----	-----	-----	-------	-----			-----	-----	-----		0.0
										TOTAL	**108.4**	**TOTAL**	**4.3**
												% Reduction Required	**NONE**

SLOPE > 20% USE PRESCRIPTIVE COMPLIANCE

Notes:

See Help Page for further descriptions of variables and items in drop-down boxes.
The last land disturbing activity on each sheet must be 'End'. This is either 12 months from the start of construction or final stabilization.
For periods of construction that exceed 12 months, please demonstrate that 5 tons/acre/year is not exceeded in any given 12 month period.

NOTE: THIS TOOL ONLY ADDRESSED SOIL EROSION DUE TO SHEET FLOW. MEASURES TO CONTROL CHANNEL EROSION MAY ALSO BE REQUIRED TO MEET SEDIMENT DISCHARGE REQUIREMENTS.

Recommended Permanent Seeding Dates:

4/1-5/15	and	8/7-8/29	Turf, introduced grasses and legumes
Thaw-6/30			Native Grasses, forbs, and legumes

Designed By:	CLH
Date	4/6/2018

APPENDIX 9

MAINTAINENCE AGREEMENT

AGREEMENT FOR MAINTENANCE OF STORMWATER MANAGEMENT MEASURES

RECITALS:

A. *Summit Credit Union*, is*(are)* the owner*(s)* of property in the City of Waukesha, County of Waukesha, State of Wisconsin, more particularly described on Exhibit A attached hereto ("Property").

B. The County requires Owner to record this Agreement regarding maintenance of stormwater management measures to be located on the Property. Owner agrees to maintain the stormwater management measures and to grant to the County the rights set forth below.

NOW, THEREFORE, in consideration of the agreement herein and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the owner agrees as follows:

This space is reserved for recording data

Return to:
Waukesha County Register of Deeds
515 W Moreland Blvd Rm AC110
Waukesha, Wisconsin 53188

Parcel Number(s):

WAKC113015001

1. Maintenance. Owner and its successors and assigns shall be responsible to repair and maintain the stormwater management measures located on the Property in good condition and in working order and such that the measures comply with approved plans on file with Waukesha County. Said maintenance shall be at the Owner's sole cost and expense. Owner will conduct such maintenance or repair work in accordance with all applicable laws, codes, regulations, and similar requirements. Specific maintenance task are more particularly described on Exhibit A.

2. Easement to County. If Owner fails to maintain the stormwater management measures as required in Section 1, then County shall have the right, after providing Owner with written notice of the maintenance issue ("Maintenance Notice") and thirty (30) days to comply with the County's maintenance request, to enter the Property in order to conduct the maintenance specified in the Maintenance Notice. County will conduct such maintenance work in accordance with all applicable laws, codes, regulations, and similar requirements and will not unreasonably interfere with Owner's use of the Property. All costs and expenses incurred by the County in conducting such maintenance may be charged to the owner of the Property by placing the amount on the tax roll for the Property as a special assessment in accordance with Section 66.0703, Wis. Stats. and applicable portions of the Waukesha County Ordinances.

3. Term/Termination. The term of this Agreement shall commence on the date that this Agreement is recorded with the Register of Deeds Office for Waukesha County, Wisconsin, and except as otherwise herein specifically provided, shall continue in perpetuity. Notwithstanding the foregoing, this Agreement may be terminated by recording with the Register of Deeds Office for Waukesha County, Wisconsin, a written instrument of termination signed by the County and all of the then-owners of the Property.

4. Miscellaneous.

   (a) Notices. Any notice, request or demand required or permitted under this Agreement shall be in writing and shall be deemed given when personally served or three (3) days after the same has been deposited with the United States Post Office, registered or certified mail, return receipt requested, postage prepaid and addressed as follows:

   If to Owner: _____
   _____
   _____
   _____

If to County: Waukesha County Land & Water Resources
515 W Moreland Blvd Rm AC110
Waukesha, Wisconsin 53188

Any party may change its address for the receipt of notice by written notice to the other.

(b) Governing Law. This Agreement shall be governed and construed in accordance with the laws of the State of Wisconsin.

(c) Amendments or Further Agreements to be in Writing. This Agreement may not be modified in whole or in part unless such agreement is in writing and signed by all parties bound hereby.

(d) Covenants Running with the Land. All of the easements, restrictions, covenants and agreements set forth in this Agreement are intended to be and shall be construed as covenants running with the land, binding upon, inuring to the benefit of, and enforceable by the parties hereto and their respective successors and assigns.

(e) Partial Invalidity. If any provisions, or portions thereof, of this Agreement or the application thereof to any person or circumstance shall, to any extent, be invalid or unenforceable, the remainder of this Agreement, or the application of such provision, or portion thereof, to any other persons or circumstances shall not be affected thereby and each provision of this Agreement shall be valid and enforceable to the fullest extent permitted by law.

X_____
Land Records Staff Signature

_____
Print or type name

State of WI, County of_____; Subscribed and sworn before me on_____by the above named person(s).

_____
Notary Public

Print or type name: _____

My Commission Expires:_____

X_____
Owner Signature

_____
Print or type name

State of WI, County of _____; Subscribed and sworn before me on _____ by the above named person(s).

_____
Notary Public

Print or type name: _____

My Commission Expires:_____

DRAFTED BY: _____
_____
_____
_____

EXHIBIT A

Lot 1 of CSM #10663

EXHIBIT B

Maintenance Provisions:

Storm Sewer System

The owner shall maintain all components of the storm sewer system located onsite. Installation and maintenance shall be in accordance with the manufacturer's guidelines. At a minimum the storm sewer system shall be inspected annually and cleaned as needed to maintain functionality and design capacity. The sumps located in the storm sewer system shall be inspected a minimum of three (3) times per year. Sediment should be removed from the sumps when sediment depth is greater than 1.5'. Owner shall maintain records of inspections, cleaning and replacement of the system or components of the system all in accordance with City of Waukesha Ordinances.

Underground Water Quality System

The owner shall install and maintain an underground storage chamber system as distributed by StormTech or approved equivalent. Said system is installed for detention and infiltration purposes to infiltrate roof water runoff. Installation and maintenance shall be in accordance with the manufacturer's guidelines. Inspect the StormTech system immediately following construction completion. Inspection of the underground storage structure shall be done a minimum of two (2) times per year or as needed until an understanding of the site characteristics is developed. More specifically, the StormTech rows shalls be visually inspected via the inspection port and is to be JetVac cleaned any time sediment has accumulated to an average depth exceeding three (3) inches. Owner shall maintain records of inspections and cleaning of the rows in accordance with the City of Waukesha Ordinances.

Detailed information regarding installation and maintenance can be found on the Internet at www.stormtech.com or by calling StormTech at 888-892-2694.