OSWEGO

STATE UNIVERSITY OF NEW YORK

West Campus Pedestrian STUDY

AUGUST 2009

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INTRODUCTION

The Administration of the State University of New York at Oswego strives to maintain a comprehensive plan for all the facilities on Campus and an ongoing strategy for plan implementation. This study examines several parts of the comprehensive plan and provides some specific implementations for West Campus pedestrian facilities. The study also identifies future needs and concerns for roadways and parking facilities on the West Campus.

STUDY BACKGROUND AND NEED

With construction underway and an anticipated opening for the Fall 2010 Semester, upperclassmen townhomes known as The Village, are situated on the south-west edge of Glimmerglass Lagoon in what is known as the West Campus. This new complex has three main points of pedestrian access to connect it with the main Campus. Each of those pedestrian facilities are existing and in varying states of disrepair. In providing new housing facilities to keep upperclassmen on Campus, the College will also need to address related needs such as increased traffic volumes and the need for additional vehicular parking. Several site visits were performed by Foit-Albert Associates to verify and quantify the needs addressed by this study.

SCOPE

The study encompasses the following scope of work:

- Obtain any existing engineering data available for the referenced project area.
- Perform field investigations to determine current facilities, condition, and to provide encompassing context of all facilities for the project area.
- Develop concepts for pedestrian facilities to improve usability and accessibility around the new townhouses and the lagoon.
- Develop concept for increased roadway traffic and vehicular parking needs related to the new townhouses.
- Develop proposed Campus Standard Details for Pedestrian Facilities.
- Develop probable opinion of construction costs for each concept.
- Develop unit costs for Standard Details provided for use in establishing funding sources and maintenance costs.

PEDESTRIAN FACILITIES CONCEPTS AND OPINION OF COSTS

Refer to the Site Map in Appendix A for locations.

LOCATION A: Existing asphalt sidewalk (15'± wide, 750'± long) that is primarily used as a recreational facility which leads East from new townhouses around the southern end of Glimmerglass Lagoon to existing sidewalk along Sweet Road.

PROPOSED CONCEPT: Though probably the most direct route to the East Campus, this sidewalk is also the least sheltered and most likely will be less traveled than Location B. As there are more appropriate means to travel between Sweet Road and the townhouses it is our recommendation to prohibit all service vehicles from regular use of this facility. It is our concept to reconstruct this facility utilizing a light duty asphalt pavement section, see standard detail SD006 – Appendix B. The cost to reconstruct this facility and rehabilitate the drainage should be budgeted at $79,200; this includes a contingency of 10% to cover fluctuations of material costs.

LOCATION B: Existing asphalt sidewalk (15'± wide, 1250'± long), that has many roles; recreational facility, major pedestrian collector and as vehicular access for service vehicles to several other West Campus buildings. This route leads north from the new townhouses to the bridge that connects the West Campus with the Hewitt Quad.

PROPOSED CONCEPT: With its dual role as pedestrian facility and vehicular access road we recommend reconstructing this facility utilizing a heavy duty asphalt pavement section, see standard detail SD007 – Appendix B. We also recommend limiting the vehicular service access to only those vehicles servicing Seneca Hall. This can be accomplished by emphasizing the separation between the walk and Pathfinder Hall access road with more landscaping elements such as new trees and other large objects. The use of signs at the connection point with Pathfinder Access road and at the north end of the walk by the bridge can reinforce that there is no thru traffic allowed, only vehicles servicing Seneca Hall. The cost to reconstruct this facility should be budgeted at $235,000; this includes a contingency of 10% for fluctuations in material costs and 15% for landscaping and signage.

LOCATION C: Existing asphalt sidewalk (8'± wide, 2750'± long) that is primarily used as a recreational facility which parallels Iroquois Trail from its origin at Sweet Road to the intersection with the access road to Pathfinder Hall.

PROPOSED CONCEPT: The section (C1) of this walkway that goes east from the townhouses to Sweet Road will most likely remain a recreational use facility, the section (C2) the goes north-west from the townhouses may receive increased pedestrian traffic due to residents need to utilize parking lots R-11 & R-13. We recommend reconstructing this facility utilizing a light duty asphalt pavement section, see standard detail SD006 – Appendix B, and prohibit all service vehicles from regular use of this facility. The cost to reconstruct this facility should be budgeted at $138,000; this includes a contingency of 10% to cover fluctuations of material costs.

TRAFFIC AND PARKING CONCEPTS AND OPINION OF COSTS

Refer to the maps in Appendix A for locations.

LOCATION D: Iroquois Trail is an existing twenty-two foot (22') wide asphalt roadway with granite curbing and a closed drainage system. It is the primary access road from the main Campus to the West Campus. The road is traveled by cars, service vehicles, buses and trucks. The road received an asphalt overlay in 2003. The existing configuration of Iroquois Trail at the entrance to the townhouses presents an awkward geometric flow, the double small radius curves and narrow lanes present limited sight distance issues and lane encroachment by transit buses and other large vehicles.

PROPOSED CONCEPT: We recommend reconstructing Iroquois Trail (D1) from the east entrance of the townhouses approximately 725'± to the west-northwest. The reconstruction should include replacing the double curves with a large radius (400') single curve and the use of wider (12' min.) lanes. The existing granite curbing can be relocated and supplemented with new as necessary. There are three existing drainage structures that will need to be modified and assume one new drainage structure. The relocation of Iroquois Trail will require the extension (100'±) of the west entrance road (D2) to the townhouses.

The townhouse facility will house approximately 350 students while only providing vehicular parking for 176±, while the College hopes that some students may not bring vehicles to Campus it cannot ignore the possibility of a parking shortage. The Southwest Athletic 'Hidden' Fields are located off Iroquois Trail in the south-west region of the Campus. Its access road is a single lane asphalt pavement that does not meet any current design standard. Within this area are two abandoned pavement areas that were formally tennis courts. These courts are in good condition and only their surface show signs of wear.

PROPOSED CONCEPT: As a possible solution to the potential parking shortage it is our recommendation to realign and reconstruct the 'Hidden Fields' access road (D3) to meet the west entrance of the townhouses and convert the existing tennis courts (D4) to two parking lots that will accommodate 176 vehicles. Due to the remote location of these lots the use of these spaces will have to be controlled for safety reasons. Possible control measures could include; gate control of the access road, no after-dark access, reduced vehicle permit rates for students willing to park in these lots long term, construct a bus turn around (D5) and provide shuttle service from anywhere on Campus.

LOCATION E: Parking alternatives that may be more cost effective to explore and allow a larger group of West Campus residents to utilize are (1) the westward expansion of Lots R-11 & R-13 and (2) new parking lot south of Oneida Hall.

Parking Lot R-11 currently has a reclaimed asphalt extension that could be converted to a more durable surface with the addition of a drainage system and asphalt pavement. Parking Lot R-13 has the same potential for expansion as R-11, the land west of these lots does vary in elevation but do not appear to be 'wet'. There is enough area there to

adequately address any stormwater needs and with appropriate landscaping can be shielded from the residential area to the northwest. It could also provide enough parking to eliminate the need for Lot-R11A which could be closed and returned to a vegetated state.

In a study performed in 2003, the location south of Oneida Hall was examined as a potential site for two configurations of parking lots. This site has the potential for providing space for 150-200± vehicles.

The following table summarizes the cost of each element:

Element	Base Estimate	Contingency	Recommended Budget Allocation
D1	$208,000	(10%±) $21,000	$229,000
D2	$39,500	(15%±) $6,000	$45,500
D3	$188,000	(10%±) $19,000	$207,000
D4	$100,000	(15%±) $15,000	$115,000
D5	$50,500	(10%±) $5,000	$55,500

Table 1- Traffic and Parking Budget Allocations

STANDARD PEDESTRIAN FACILITIES DETAILS AND OPINION OF COSTS

Refer to the Standard Details in Appendix B.

The College has made an effort to standardize the look of various facilities throughout the Campus. In an attempt to provide various departments of the College with a useful set of tools for budgeting for future pedestrian facilities and maintenance of existing facilities, we have provided Standard Details (Appendix B) and the following table of unit costs.

Standard Detail	Base Estimate	With 10% Contingency	With 15% Contingency
SD001	$11.70/Sq. Ft.	$12.90/Sq. Ft.	$13.50/Sq. Ft.
SD002	$12.60/Sq. Ft.	$13.90/Sq. Ft.	$14.50/Sq. Ft.
SD003	$18.00/Sq. Ft.	$19.80/Sq. Ft.	$20.70/Sq. Ft.
SD004	$22.20/Sq. Ft.	$24.40/Sq. Ft.	$25.50/Sq. Ft.
SD005	$25.00/Sq. Ft.	$27.50/Sq. Ft.	$28.80/Sq. Ft.
SD006	$5.70/Sq. Ft.	$6.30/Sq. Ft.	$6.60/Sq. Ft.
SD007	$9.90/Sq. Ft.	$10.90/Sq. Ft.	$11.40/Sq. Ft.

Table 2- Standard Pedestrian Facilities Unit Costs*

* This table is based on 2009 3rd quarter construction costs for an assumed project of 500 LF and average width of the detail, as time goes by the user must apply standard inflation methods and monitor current construction trends.

Appendix A
West Campus Site Plans

C100

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State University of New York at Oswego
Facilities Services
West Campus Pedestrian Study

SITE PLAN

OSWEGO
STATE UNIVERSITY OF NEW YORK


THE VILLAGE
IROQUOIS TRAIL
HIDDEN FIELDS
D1
D2
D3
D4
D5
OSWEGO
STATE UNIVERSITY OF NEW YORK
State University of New York at Oswego
Facilities Services
West Campus Pedestrian Study
ENLARGED SITE PLAN - IROQUOIS TRAIL / HIDDEN FIELDS
09031.00
C101

Appendix B
Standard Details for Pedestrian Facilities

ANTICIPATED VEHICULAR TRAFFIC:
SNOW REMOVAL ONLY

CONTRACTION JOINTS:

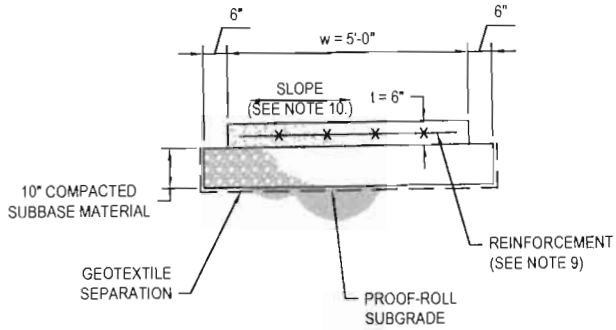
1. CONTRACTION JOINTS SHALL BE CONSTRUCTED AT MAXIMUM OF FIVE FEET (5'-0") ON CENTER.
2. CONTRACTION JOINTS SHALL BE STRUCK AND/OR CUT TO A MINIMUM DEPTH OF TWO INCHES (2") OR 1/3.
3. CONTRACTION JOINTS SHALL HAVE A MINIMUM WIDTH OF ONE EIGHTH INCH (⅛") TO A MAXIMUM WIDTH OF ONE QUARTER INCH (¼").

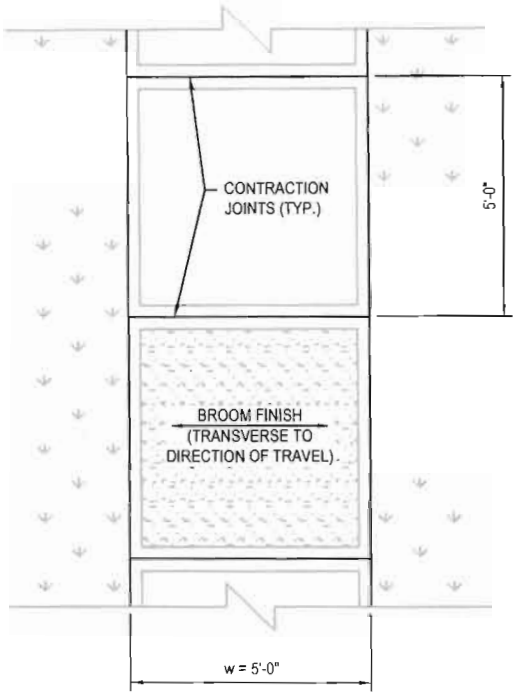
ISOLATION JOINTS:

3. ISOLATION JOINTS SHALL BE CONSTRUCTED TO SEPARATE SIDEWALK FROM ANY ADJOINING BUILDING STRUCTURES, CURBS, UTILITY STRUCTURES OR ANY OTHER IMMOVABLE OBJECTS.
4. ISOLATION JOINTS SHALL BE CONSTRUCTED BY PLACING JOINT FILLER MATERIAL, AT THE TIME OF CONCRETE PLACEMENT, WHOSE HEIGHT IS THE FULL THICKNESS OF THE SIDEWALK AND IS A MAXIMUM OF ONE HALF INCH (½") THICK.
5. JOINT FILLER; ASTM D 1751, ASPHALT-SATURATED CELLULOSIC FIBER, FULL HEIGHT, FULL WIDTH. COMPATIBLE WITH SEALANT.

SIDEWALK NOTES:

6. THE CONCRETE SHALL BE FINISHED TO PRODUCE A SMOOTH SURFACE AND THEN GIVEN A BROOM FINISH TRANSVERSE TO THE DIRECTION OF TRAVEL.
7. ALL EDGES AND JOINTS SHALL BE TOOLED WITH A TWO INCH (2") EDGING TOOL HAVING A QUARTER INCH (¼") RADIUS.
8. CURB RAMPS WITH DETECTABLE WARNINGS SHALL BE CONSTRUCTED AT ALL INTERSECTIONS WITH ROADWAYS AND SHALL BE IN ACCORDANCE WITH ADAAG (2004).
9. SIDEWALK SHALL BE REINFORCED WITH ONE OF THE FOLLOWING:
   WELDED WIRE (WWF 6 x 6 - W2.9 x W2.9 PLACED AT DEPTH t/2)
   OR
   FIBER REINFORCEMENT (ASTM C 1116, TYPE III AT A RATE OF TWO POUNDS (2 lbs) OF FIBERS PER CUBIC YARD (1 cy) OF CONCRETE)
10. CROSS SLOPE SIDEWALK UNIFORMLY, ACROSS TOTAL WIDTH, FOR BEST POSSIBLE DRAINAGE WITH THE SURROUNDING GRADE AT A RATE OF ONE EIGHTH (⅛") INCH PER FOOT (1') MINIMUM TO ONE QUARTER (¼") INCH PER FOOT (1') MAXIMUM IN ACCORDANCE WITH ADAAG (2004).





PLAIN CONCRETE SIDEWALK (5'-0" WIDTH, 6" THICK)

SCALE: 3" = 1'-0"

State University of New York at Oswego
Facilities Services
Standard Construction Details

PREPARED BY:

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OSWEGO
STATE UNIVERSITY OF NEW YORK

SD001

DATE: AUG. 2009

ANTICIPATED VEHICULAR TRAFFIC: SNOW REMOVAL ONLY

CONTRACTION JOINTS:

1. CONTRACTION JOINTS SHALL BE CONSTRUCTED AT MAXIMUM OF FOUR FEET (4'-0") ON CENTER EACH DIRECTION.
2. CONTRACTION JOINTS SHALL BE STRUCK AND/OR CUT TO A MINIMUM DEPTH OF TWO INCHES (2") OR 1/3.
3. CONTRACTION JOINTS SHALL HAVE A MINIMUM WIDTH OF ONE EIGHTH INCH (⅛") TO A MAXIMUM WIDTH OF ONE QUARTER INCH (¼").

ISOLATION JOINTS:

3. ISOLATION JOINTS SHALL BE CONSTRUCTED TO SEPARATE SIDEWALK FROM ANY ADJOINING BUILDING STRUCTURES, CURBS, UTILITY STRUCTURES OR ANY OTHER IMMOVABLE OBJECTS.
4. ISOLATION JOINTS SHALL BE CONSTRUCTED BY PLACING JOINT FILLER MATERIAL, AT THE TIME OF CONCRETE PLACEMENT, WHOSE HEIGHT IS THE FULL THICKNESS OF THE SIDEWALK AND IS A MAXIMUM OF ONE HALF INCH (½") THICK.
5. JOINT FILLER; ASTM D 1751, ASPHALT-SATURATED CELLULOSIC FIBER, FULL HEIGHT, FULL WIDTH. COMPATIBLE WITH SEALANT.

SIDEWALK NOTES:

6. THE CONCRETE SHALL BE FINISHED TO PRODUCE A SMOOTH SURFACE AND THEN GIVEN A BROOM FINISH TRANSVERSE TO THE DIRECTION OF TRAVEL.
7. ALL EDGES AND JOINTS SHALL BE TOOLED WITH A TWO INCH (2") EDGING TOOL HAVING A QUARTER INCH (¼") RADIUS.
8. CURB RAMPS WITH DETECTABLE WARNINGS SHALL BE CONSTRUCTED AT ALL INTERSECTIONS WITH ROADWAYS AND SHALL BE IN ACCORDANCE WITH ADAAG (2004).
9. SIDEWALK SHALL BE REINFORCED WITH ONE OF THE FOLLOWING:
   WELDED WIRE (WWF 6 x 6 - W2.9 x W2.9 PLACED AT DEPTH t/2)
   OR
   FIBER REINFORCEMENT (ASTM C 1116, TYPE III AT A RATE OF TWO POUNDS (2 lbs) OF FIBERS PER CUBIC YARD (1 cy) OF CONCRETE)
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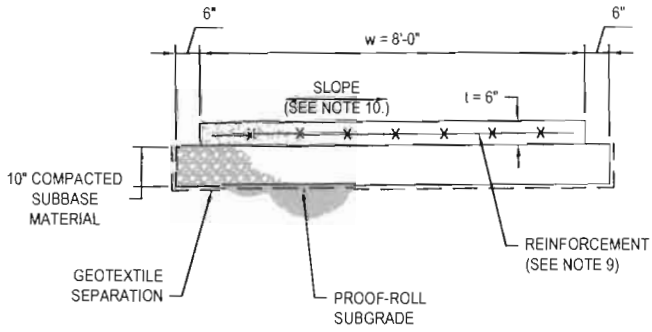

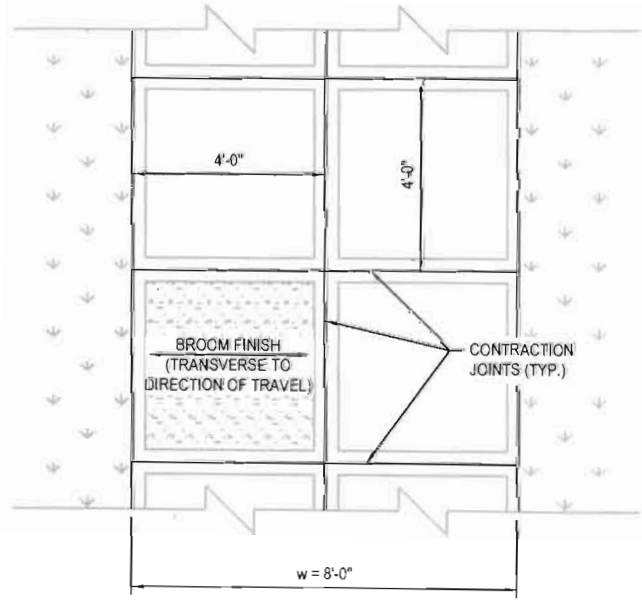

PLAIN CONCRETE SIDEWALK (8'-0" WIDTH, 6" THICK)

SCALE: 3" = 1'-0"

State University of New York at Oswego
Facilities Services
Standard Construction Details

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OSWEGO STATE UNIVERSITY OF NEW YORK

SID002

DATE: AUG. 2009

ANTICIPATED VEHICULAR TRAFFIC: SNOW REMOVAL & SERVICE VEHICLES

CONTRACTION JOINTS:

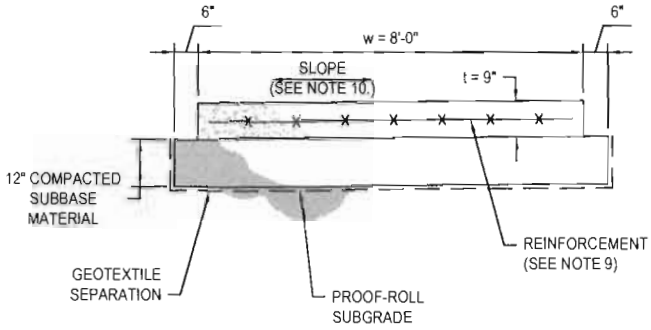
1. CONTRACTION JOINTS SHALL BE CONSTRUCTED AT MAXIMUM OF FOUR FEET (4'-0") ON CENTER EACH DIRECTION.
2. CONTRACTION JOINTS SHALL BE STRUCK AND/OR CUT TO A MINIMUM DEPTH OF TWO INCHES (3") OR t/3.
3. CONTRACTION JOINTS SHALL HAVE A MINIMUM WIDTH OF ONE EIGHTH INCH (⅛") TO A MAXIMUM WIDTH OF ONE QUARTER INCH (¼").

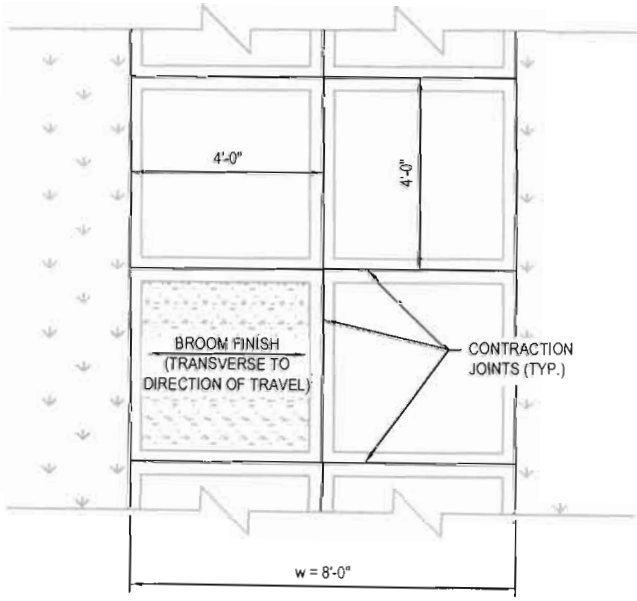
ISOLATION JOINTS:

3. ISOLATION JOINTS SHALL BE CONSTRUCTED TO SEPARATE SIDEWALK FROM ANY ADJOINING BUILDING STRUCTURES, CURBS, UTILITY STRUCTURES OR ANY OTHER IMMOVABLE OBJECTS.
4. ISOLATION JOINTS SHALL BE CONSTRUCTED BY PLACING JOINT FILLER MATERIAL, AT THE TIME OF CONCRETE PLACEMENT, WHOSE HEIGHT IS THE FULL THICKNESS OF THE SIDEWALK AND IS A MAXIMUM OF ONE HALF INCH (½") THICK.
5. JOINT FILLER; ASTM D 1751, ASPHALT-SATURATED CELLULOSIC FIBER, FULL HEIGHT, FULL WIDTH, COMPATIBLE WITH SEALANT.

SIDEWALK NOTES:

6. THE CONCRETE SHALL BE FINISHED TO PRODUCE A SMOOTH SURFACE AND THEN GIVEN A BROOM FINISH TRANSVERSE TO THE DIRECTION OF TRAVEL.
7. ALL EDGES AND JOINTS SHALL BE TOOLED WITH A TWO INCH (2") EDGING TOOL HAVING A QUARTER INCH (¼") RADIUS.
8. CURB RAMPS WITH DETECTABLE WARNINGS SHALL BE CONSTRUCTED AT ALL INTERSECTIONS WITH ROADWAYS AND SHALL BE IN ACCORDANCE WITH ADAAG (2004).
9. SIDEWALK SHALL BE REINFORCED WITH WELDED WIRE (WWF 6 x 12 - W8 x W5 PLACED AT DEPTH t/2).
10. CROSS SLOPE SIDEWALK UNIFORMLY, ACROSS TOTAL WIDTH, FOR BEST POSSIBLE DRAINAGE WITH THE SURROUNDING GRADE AT A RATE OF ONE EIGHTH (⅛") INCH PER FOOT (1') MINIMUM TO ONE QUARTER (¼") INCH PER FOOT (1') MAXIMUM IN ACCORDANCE WITH ADAAG (2004).





PLAIN CONCRETE SIDEWALK (8'-0" WIDTH, 9" THICK)

SCALE: 3" = 1'-0"

State University of New York at Oswego
Facilities Services
Standard Construction Details

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OSWEGO
STATE UNIVERSITY OF NEW YORK

SD003

DATE: AUG. 2009

ANTICIPATED VEHICULAR TRAFFIC:
SNOW REMOVAL ONLY

CONTRACTION JOINTS:

1. CONTRACTION JOINTS SHALL BE CONSTRUCTED AT MAXIMUM OF FOUR FEET (4'-0") ON CENTER EACH DIRECTION.
2. CONTRACTION JOINTS SHALL BE STRUCK AND/OR CUT TO A MINIMUM DEPTH OF TWO INCHES (3") OR 1/3.
3. CONTRACTION JOINTS SHALL HAVE A MINIMUM WIDTH OF ONE EIGHTH INCH (⅛") TO A MAXIMUM WIDTH OF ONE QUARTER INCH (¼").

ISOLATION JOINTS:

3. ISOLATION JOINTS SHALL BE CONSTRUCTED TO SEPARATE SIDEWALK FROM ANY ADJOINING BUILDING STRUCTURES, CURBS, UTILITY STRUCTURES OR ANY OTHER IMMOVABLE OBJECTS.
4. ISOLATION JOINTS SHALL BE CONSTRUCTED BY PLACING JOINT FILLER MATERIAL, AT THE TIME OF CONCRETE PLACEMENT, WHOSE HEIGHT IS THE FULL THICKNESS OF THE SIDEWALK AND IS A MAXIMUM OF ONE HALF INCH (½") THICK.
5. JOINT FILLER: ASTM D 1751, ASPHALT-SATURATED CELLULOSIC FIBER, FULL HEIGHT, FULL WIDTH. COMPATIBLE WITH SEALANT.

SIDEWALK NOTES:

6. THE CONCRETE SHALL BE FINISHED TO PRODUCE A SMOOTH SURFACE AND THEN GIVEN A BROOM FINISH TRANSVERSE TO THE DIRECTION OF TRAVEL.
7. ALL EDGES AND JOINTS SHALL BE TOOLED WITH A TWO INCH (2") EDGING TOOL HAVING A QUARTER INCH (¼") RADIUS.
8. CURB RAMPS WITH DETECTABLE WARNINGS SHALL BE CONSTRUCTED AT ALL INTERSECTIONS WITH ROADWAYS AND SHALL BE IN ACCORDANCE WITH ADAAG (2004).
9. SIDEWALK SHALL BE REINFORCED WITH WELDED WIRE (WWF 6 x 12 - W8 x W5 PLACED AT DEPTH t/2).
10. CROSS SLOPE SIDEWALK, UNIFORMLY ACROSS TOTAL WIDTH OR CROWN, FOR BEST POSSIBLE DRAINAGE WITH THE SURROUNDING GRADE AT A RATE OF ONE EIGHTH (⅛") INCH PER FOOT (1') MINIMUM TO ONE QUARTER (¼") INCH PER FOOT (1') MAXIMUM IN ACCORDANCE WITH ADAAG (2004).

PAVER BAND NOTES:

11. CAST WEEP TUBES INTO CONCRETE. PRIOR TO PLACING SAND SETTING BED, PACK WEEP TUBES WITH SETTING BED MATERIAL AND PLACE 8"x8" GEOTEXTILE FABRIC OVER THE WEEP TUBE.
12. ADJUST DIMENSION, TO THE INSIDE AS REQUIRED, TO ALLOW FOR FULL BRICK AND SPECIFIED JOINT WIDTHS BETWEEN EDGE RESTRAINT AND SIDEWALK.
13. SETTING BED MINIMUM THICKNESS 1 INCH. MAXIMUM THICKNESS 2". CONCRETE SUBSTRATE BELOW SETTING BED TO PITCH TOWARDS WEEP TUBES.
14. DETERMINE LOOSE SETTING BED DEPTH BY TRIAL AND ERROR, SUCH THAT COMPACTED PAVERS ARE ¼" MAXIMUM ABOVE CONCRETE WALK AND EDGE RESTRAINTS.

CONCRETE SIDEWALK WITH PAVER EDGE BAND
(10'-0" WIDTH, 6" THICK)

SCALE: 3" = 1'-0"

State University of New York at Oswego
Facilities Services
Standard Construction Details

OSWEGO STATE UNIVERSITY OF NEW YORK

SD004

DATE: AUG. 2009

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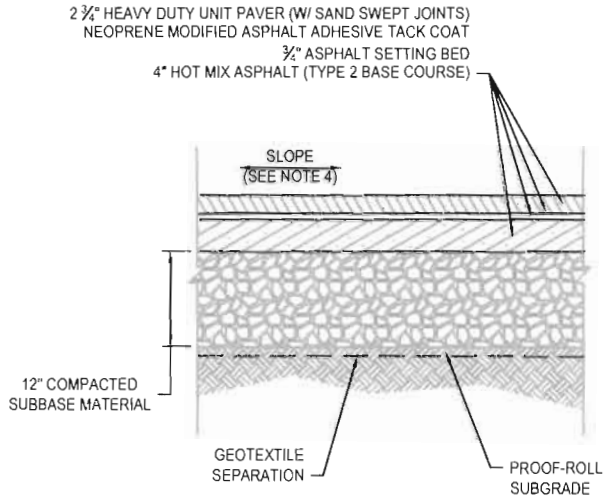
ANTICIPATED VEHICULAR TRAFFIC: SNOW REMOVAL & SERVICE VEHICLES

ISOLATION JOINTS:

1. ISOLATION JOINTS SHALL BE CONSTRUCTED TO SEPARATE PAVEMENT FROM ANY ADJOINING BUILDING STRUCTURES, CURBS, UTILITY STRUCTURES OR ANY OTHER IMMOVABLE OBJECTS.
2. ISOLATION JOINTS SHALL BE CONSTRUCTED BY PLACING JOINT FILLER MATERIAL, AT THE TIME OF SUBBASE PLACEMENT, WHOSE HEIGHT IS THE FULL THICKNESS OF THE PAVEMENT LAYERS AND IS A MAXIMUM OF ONE HALF INCH (½") THICK.
3. JOINT FILLER; ASTM D 1751, ASPHALT-SATURATED CELLULOSIC FIBER, FULL HEIGHT, FULL WIDTH. COMPATIBLE WITH SEALANT.

MISCELLANEOUS NOTES:

4. CROSS SLOPE SURFACE UNIFORMLY, ACROSS TOTAL WIDTH OR CROWN, FOR BEST POSSIBLE DRAINAGE WITH THE SURROUNDING GRADE AT A RATE OF ONE EIGHTH (⅛") INCH PER FOOT (1') MINIMUM TO ONE QUARTER (¼") INCH PER FOOT (1') MAXIMUM IN ACCORDANCE WITH ADAAG (2004).
5. PROVIDE AN APPROPRIATE EDGE RESTRAINT IN CASES WHERE NO SUITABLE SUPPORT IS EXISTING.



UNIT PAVERS ON ASPHALT BASE (HEAVY DUTY)

SCALE: 3" = 1'-0"

State University of New York at Oswego
Facilities Services
Standard Construction Details

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OSWEGO
STATE UNIVERSITY OF NEW YORK

SD005

DATE: AUG. 2009

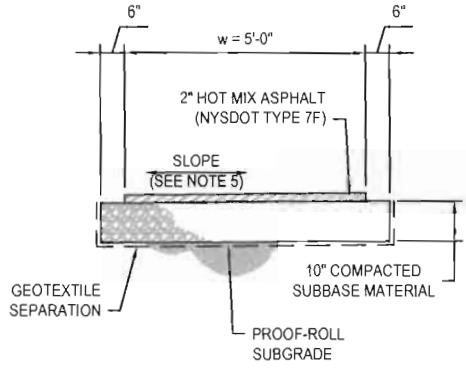
ANTICIPATED VEHICULAR TRAFFIC: SNOW REMOVAL ONLY

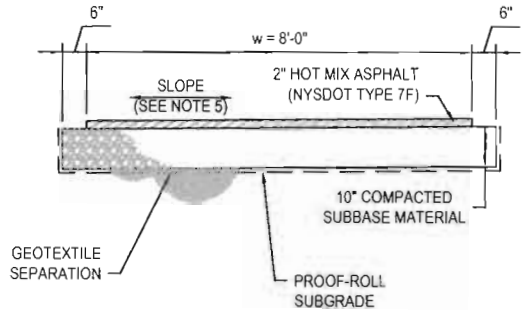
ISOLATION JOINTS:

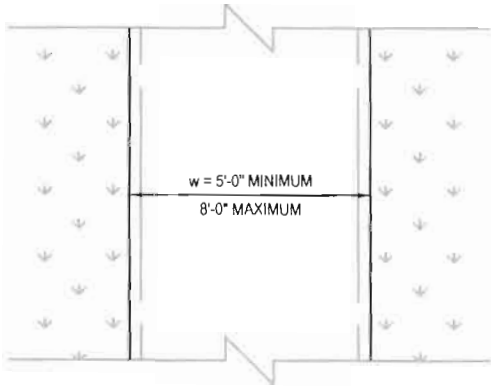
1. ISOLATION JOINTS SHALL BE CONSTRUCTED TO SEPARATE SIDEWALK FROM ANY ADJOINING BUILDING STRUCTURES, CURBS, UTILITY STRUCTURES OR ANY OTHER IMMOVABLE OBJECTS.
2. ISOLATION JOINTS SHALL BE CONSTRUCTED BY PLACING JOINT FILLER MATERIAL, AT THE TIME OF SUBBASE PLACEMENT, WHOSE HEIGHT IS A MINIMUM OF FOUR INCHES (4") AND IS A MAXIMUM OF ONE HALF INCH (½") THICK.
3. JOINT FILLER; ASTM D 1751, ASPHALT-SATURATED CELLULOSIC FIBER, FULL HEIGHT, FULL WIDTH. COMPATIBLE WITH SEALANT.

SIDEWALK NOTES:

4. CURB RAMPS WITH DETECTABLE WARNINGS SHALL BE CONSTRUCTED AT ALL INTERSECTIONS WITH ROADWAYS AND SHALL BE IN ACCORDANCE WITH ADAAG (2004).
5. CROSS SLOPE SIDEWALK UNIFORMLY, ACROSS TOTAL WIDTH, FOR BEST POSSIBLE DRAINAGE WITH THE SURROUNDING GRADE AT A RATE OF ONE EIGHTH (⅛") INCH PER FOOT (1') MINIMUM TO ONE QUARTER (¼") INCH PER FOOT (1') MAXIMUM IN ACCORDANCE WITH ADAAG (2004).







ASPHALT SIDEWALK (LIGHT DUTY)

SCALE: 3" = 1'-0"

State University of New York at Oswego
Facilities Services
Standard Construction Details

PREPARED BY:

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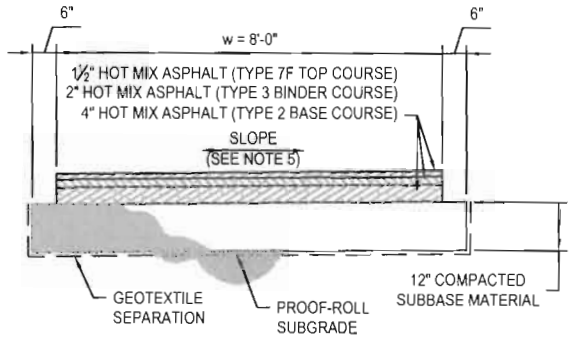
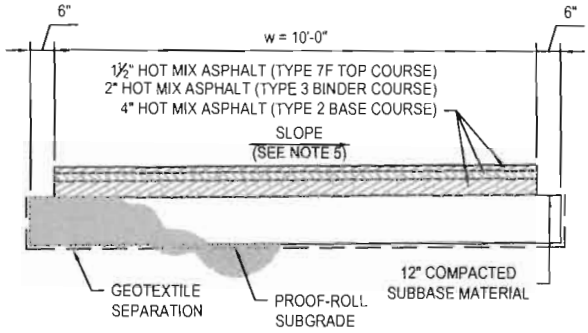
OSWEGO
STATE UNIVERSITY OF NEW YORK

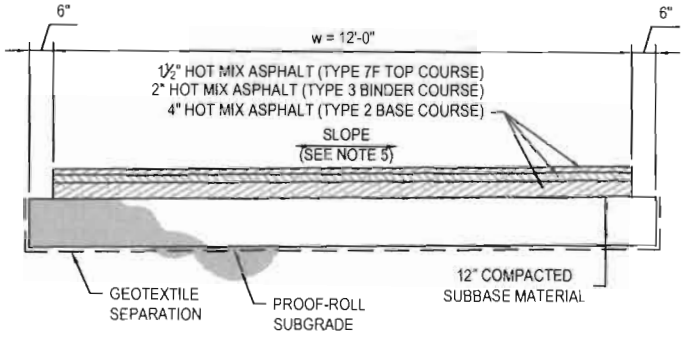
SD006

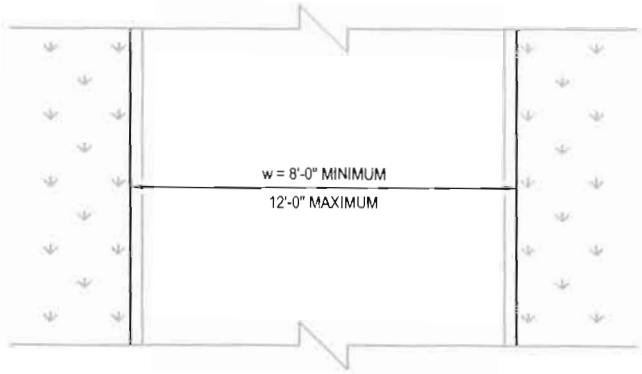
DATE: AUG. 2009

ANTICIPATED VEHICULAR TRAFFIC: SNOW REMOVAL & SERVICE VEHICLES









ISOLATION JOINTS:

1. ISOLATION JOINTS SHALL BE CONSTRUCTED TO SEPARATE SIDEWALK FROM ANY ADJOINING BUILDING STRUCTURES, CURBS, UTILITY STRUCTURES OR ANY OTHER IMMOVABLE OBJECTS.
2. ISOLATION JOINTS SHALL BE CONSTRUCTED BY PLACING JOINT FILLER MATERIAL, AT THE TIME OF SUBBASE PLACEMENT, WHOSE HEIGHT IS THE FULL THICKNESS OF THE ASPHALT LAYERS AND IS A MAXIMUM OF ONE HALF INCH (½") THICK.
3. JOINT FILLER; ASTM D 1751, ASPHALT-SATURATED CELLULOSIC FIBER, FULL HEIGHT, FULL WIDTH. COMPATIBLE WITH SEALANT.

SIDEWALK NOTES:

4. CURB RAMPS WITH DETECTABLE WARNINGS SHALL BE CONSTRUCTED AT ALL INTERSECTIONS WITH ROADWAYS AND SHALL BE IN ACCORDANCE WITH ADAAG (2004).
5. CROSS SLOPE SIDEWALK UNIFORMLY, ACROSS TOTAL WIDTH OR CROWN, FOR BEST POSSIBLE DRAINAGE WITH THE SURROUNDING GRADE AT A RATE OF ONE EIGHTH (⅛") INCH PER FOOT (1') MINIMUM TO ONE QUARTER (¼") INCH PER FOOT (1') MAXIMUM IN ACCORDANCE WITH ADAAG (2004).

ASPHALT SIDEWALK (HEAVY DUTY)

SCALE: 3" = 1'-0"

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OSWEGO STATE UNIVERSITY OF NEW YORK

SD007

DATE: AUG. 2009

Appendix C
Base Estimates

BASE ESTIMATES

Description	Amount
Earthwork	$18,000
Geotextile	$4,500
Subbase	$25,700
Hot Mix Asphalt	$16,000
Drainage	$7,800
Total	**$72,000**

Table E-1: Location A – Sidewalk w/ Drainage

Description	Amount
Earthwork	$40,900
Geotextile	$7,300
Subbase	$39,000
Hot Mix Asphalt	$96,600
Tack Coat	$1,900
Landscaping & Signage	$27,900
Total	**$213,600**

Table E-2: Location B – Sidewalk w/ Landscaping and Signage

Description	Amount
Earthwork	$35,100
Geotextile	$8,700
Subbase	$50,200
Hot Mix Asphalt	$31,400
Total	**$125,400**

Table E-3: Location C – Sidewalk

Description	Amount
Earthwork	$44,000
Granite Curb	$27,200
Geotextile	$4,100
Subbase	$30,200
Hot Mix Asphalt	$69,300
Tack Coat	$1,400
Drainage	$5,800
Landscaping & Signage	$25,000
Total	**$208,000**

Table E-2: Location D1 – Iroquois Trail Realignment

Description	Amount
Earthwork	$6,900
Granite Curb	$6,300
Geotextile	$1,000
Subbase	$6,400
Hot Mix Asphalt	$15,800
Tack Coat	$300
Sidewalk	$2,800
Total	**$39,500**

Table E-2: Location D2 – 'The Village' Entrance Extension

Description	Amount
Earthwork	$34,800
Geotextile	$4,200
Subbase	$31,900
Hot Mix Asphalt	$73,000
Tack Coat	$1,500
Sidewalk	$22,600
Landscaping & Signage	$20,000
Total	**$188,000**

Table E-2: Location D3 – 'Hidden Fields' Drive Realignment

Description	Amount
Earthwork	$30,100
Subbase	$7,900
Hot Mix Asphalt	$57,600
Tack Coat	$1,900
Landscaping & Signage	$2,500
Total	**$100,000**

Table E-2: Location D4 – 'Hidden Fields' Parking Lots

Description	Amount
Earthwork	$10,700
Geotextile	$1,700
Subbase	$11,000
Hot Mix Asphalt	$26,500
Tack Coat	$600
Total	**$50,500**

Table E-2: Location D3 – 'Hidden Fields' Bus Turn-Around

Appendix D
Supplement – Sept. 2009

LOCATION E1: The area currently known as Parking Lots R-11, R13 & R-11A and the undeveloped lands directly east of Lots R-11 & R-13 were preliminarily evaluated for the existence of 'Wetlands'. There were no apparent Federal or State freshwater wetlands found in that vicinity. See Appendix D1 for Federal and State maps. This preliminary investigation does not provide a conclusive determination on the existence of wetlands and should be followed up with an on-site determination provided by a certified wetland professional.

Parking Lot R-11 (E1a) currently has a reclaimed asphalt extension that accommodates 91± vehicles. This extension was not constructed using a conventional section of separation fabric, granular subbase, asphalt pavement or any consideration of stormwater management. We recommend excavating the existing material and fully reconstruct the pavement section with consideration for drainage and snow removal. We recommend reusing the asphalt millings as fill to raise grade for the extension of Lot R-13 and not as subbase for the pavement.

Parking Lot R-13 has potential to expand to the west. We recommend two options for providing additional and replacement parking capacity. Option (E1b) is to provide 174± spaces to accommodate resident vehicles from the 'Village' townhouses. The layout and design should consider methods for handling on-site stormwater and snow melt treatment. Option (E1c) is to increase the expansion of Lot R-13 an additional 91± spaces for a total expansion of 265± spaces. These additional spaces will replace the spaces of Lot R-11A to the northwest. This lot was constructed as temporary overflow and is constructed of a high maintenance granular surface with no drainage. The lots surface becomes very unstable during the wet seasons and does not present an attractive visual element for the College and the adjacent private residences. If this option is selected we recommend returning the area of Lot R-11A back to a natural state or as a site for stormwater management and/or wetland remediation.

The following table summarizes the cost of each element:

Element	Base Estimate	Contingency	Recommended Budget Allocation
E1(a)	$233,200	(10%±) $23,000	$256,200
E1(b)	$378,200	(10%±) $37,800	$416,000
E1(c)	$205,600	(10%±) $20,600	$226,200

Table 1b- Parking Alternative Budget Allocations

Appendix D1
Wetland Maps

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Please set your printer orientation to "Landscape".

SUNY Oswego

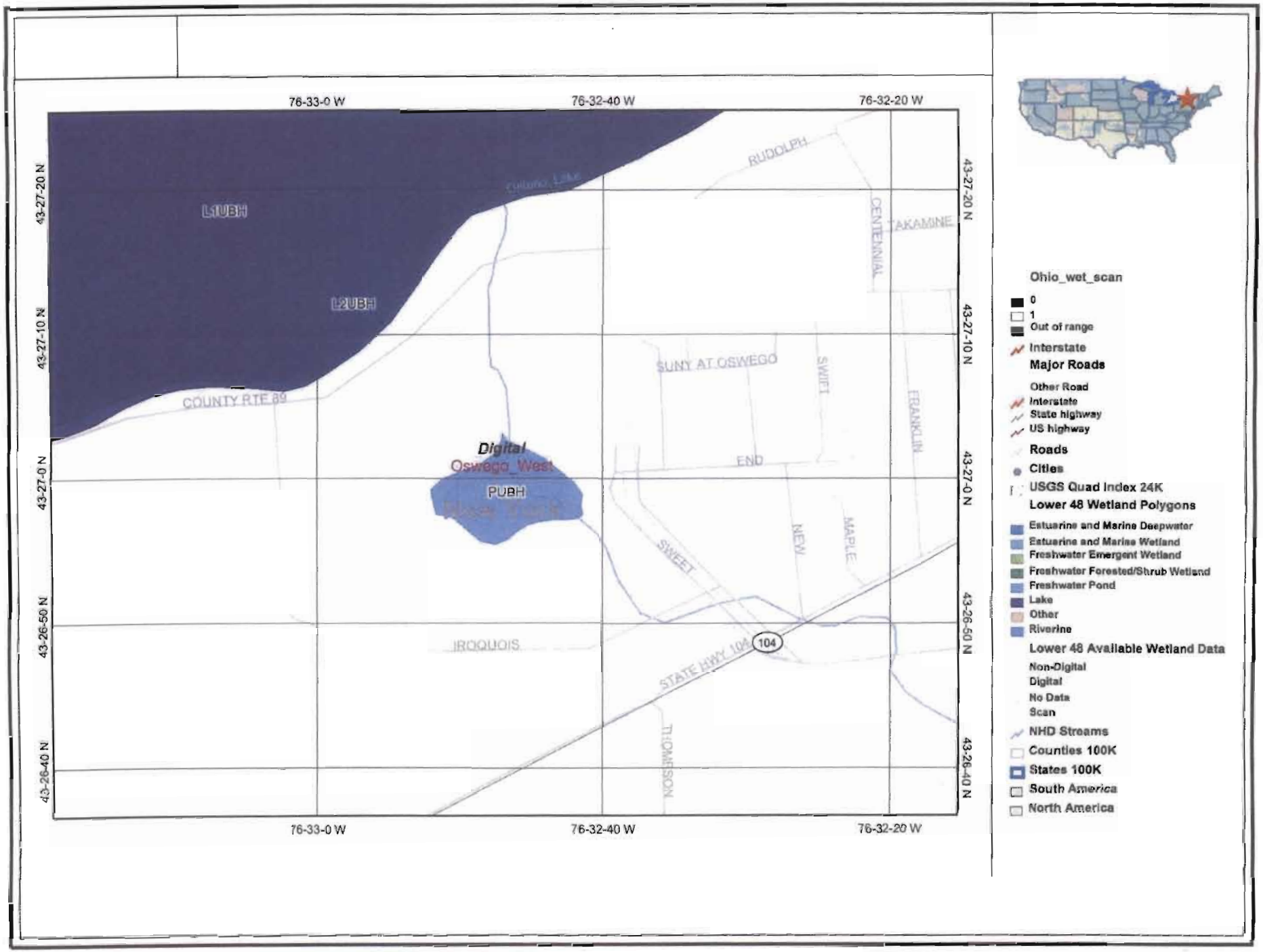
MinX: 373483, MaxX: 375562, MinY: 4812465, MaxY: 4810859

Visible Layers

- Classified Streams
- Classified Ponds
- State-Regulated Freshwater Wetlands
- Wetland Checkzone
- State-Regulated Freshwater Wetlands
- Rare Plants and Rare Animals
- Interstate Highways
- Adirondack Park Boundary
- Counties

Disclaimer:This map was prepared by the New York State Department of Environmental Conservation using the most


L1UBH
L2UBH
PUBH
Google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76-32-40 W
76-32-20 W
43-27-20 N
43-27-10 N
43-27-0 N
43-26-50 N
43-26-40 N
L1UBH
L2UBH
PUBH
Digital
Oswego_West
RUDOLPH
TAKAMINE
CENTENNIAL
SUNY AT OSWEGO
SWIFT
FRANKLIN
COUNTY RTE 89
END
SWEET
NEW
MAPLE
IROQUOIS
STATE HWY 104
104
THOMPSON
Ohio_wet_scan
0
1
Out of range
Interstate
Major Roads
Other Road
Interstate
State highway
US highway
Roads
Cities
USGS Quad Index 24K
Lower 48 Wetland Polygons
Estuarine and Marine Deepwater
Estuarine and Marine Wetland
Freshwater Emergent Wetland
Freshwater Forested/Shrub Wetland
Freshwater Pond
Lake
Other
Riverine
Lower 48 Available Wetland Data
Non-Digital
Digital
No Data
Scan
NHD Streams
Counties 100K
States 100K
South America
North America

Appendix D2
Base Estimates

BASE ESTIMATES

Description	Amount
Earthwork	$20,600
Geotextile	$6,400
Subbase	$55,600
Hot Mix Asphalt	$124,200
Tack Coat	$1,400
Landscape & Drainage	$25,000
Total	**$233,200**

Table D2-1: Location E1(a) – Parking Lot R-11

Description	Amount
Earthwork	$65,900
Geotextile	$9,200
Subbase	$84,900
Hot Mix Asphalt	$186,100
Tack Coat	$2,100
Landscaping & Drainage	$30,000
Total	**$378,200**

Table D2-2: Location E1(b) – Parking Lot R-13

Description	Amount
Earthwork	$34,700
Geotextile	$4,900
Subbase	$41,300
Hot Mix Asphalt	$93,600
Tack Coat	$1,100
Landscaping & Drainage	$30,000
Total	**$205,600**

Table D2-3: Location E1(c) – Parking Lot R-13/R-11A

Appendix D
Supplement – Sept. 2009

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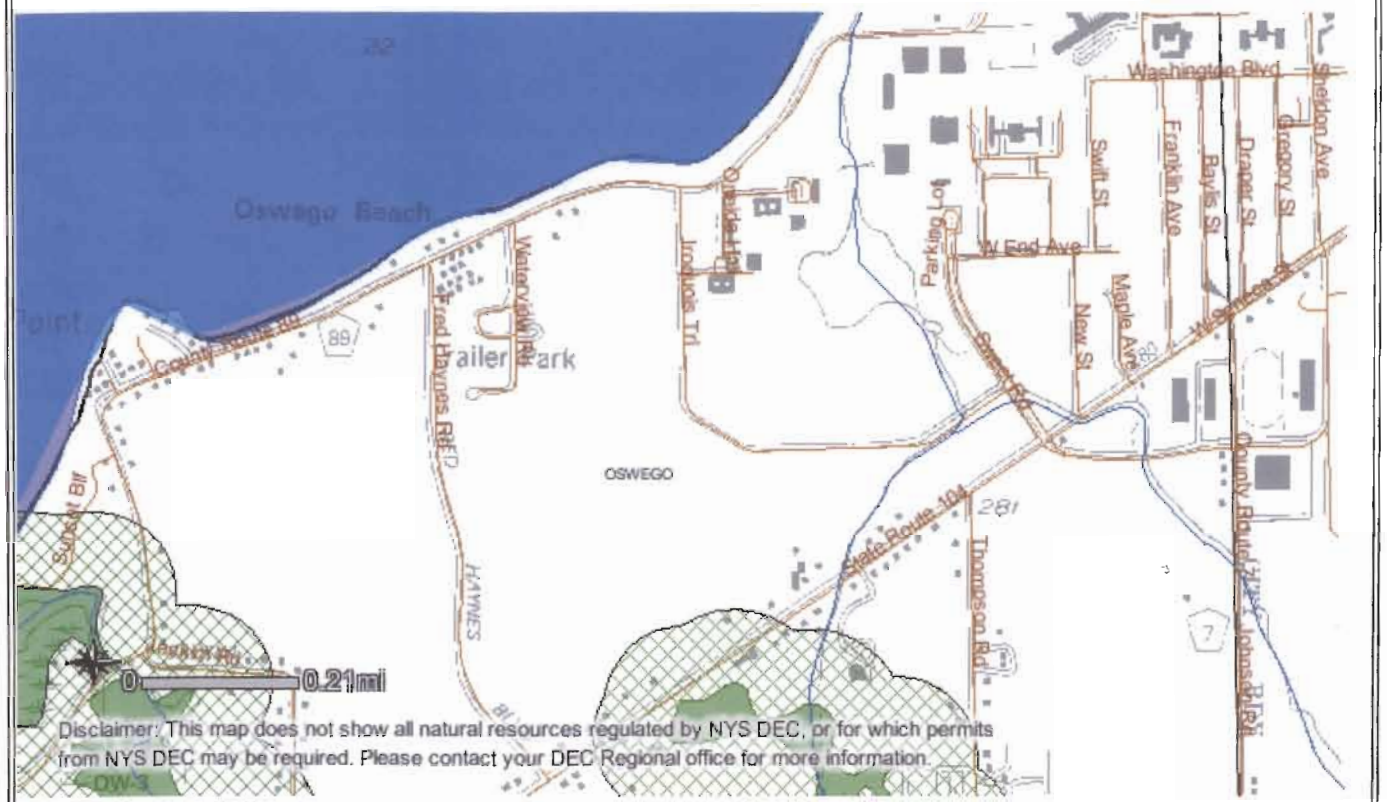
SUNY Oswego



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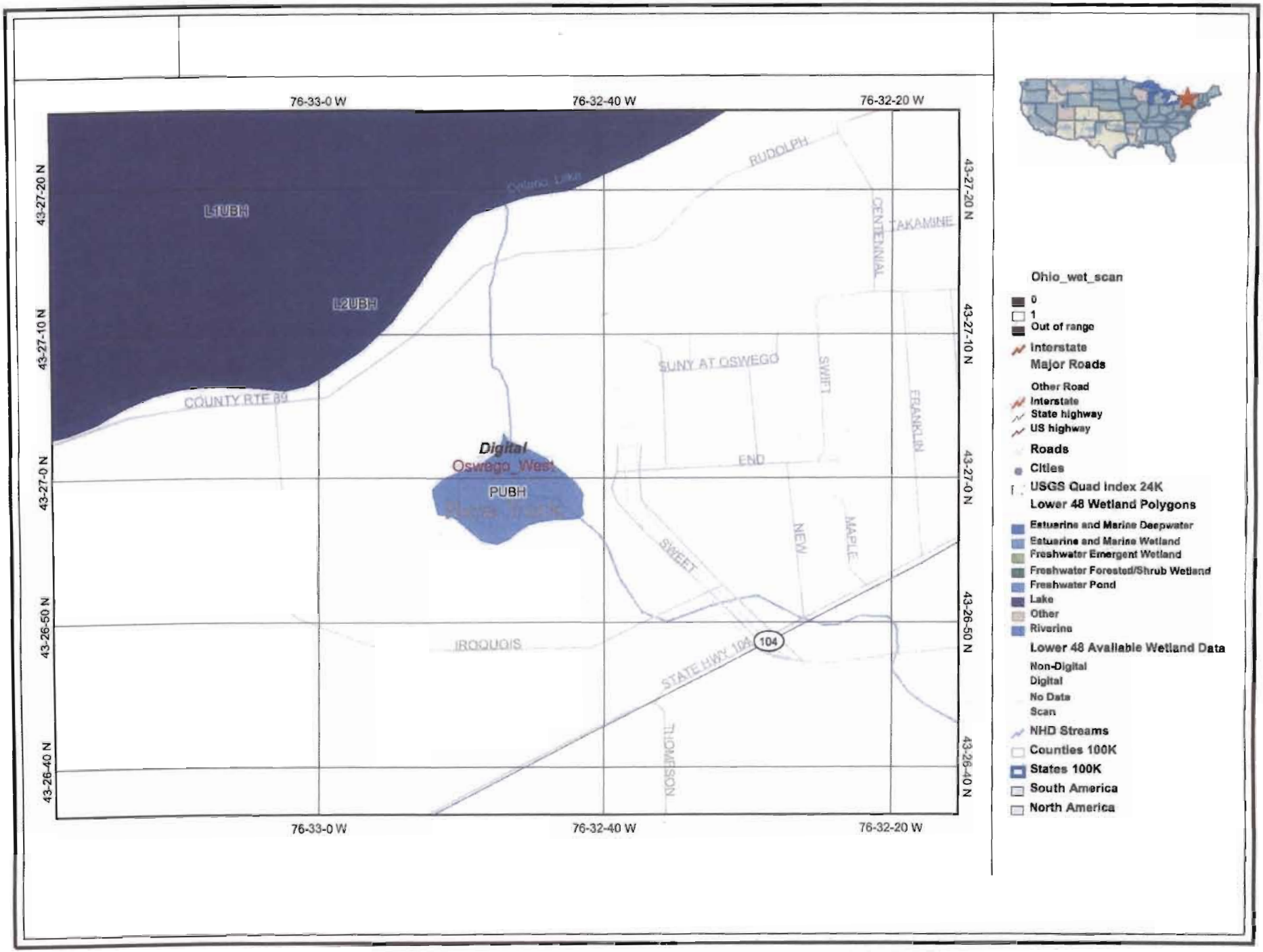
76-33-0 W
76-32-40 W
76-32-20 W
43-27-20 N
43-27-10 N
43-27-0 N
43-26-50 N
43-26-40 N
L1UBH
L2UBH
PUBH
Digital
Oswego_West
RUDOLPH
TAKAMINE
CENTENNIAL
SUNY AT OSWEGO
SWIFT
FRANKLIN
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NEW
MAPLE
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STATE HWY 104
104
THOMPSON
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Out of range
Interstate
Major Roads
Other Road
Interstate
State highway
US highway
Roads
Cities
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Estuarine and Marine Deepwater
Estuarine and Marine Wetland
Freshwater Emergent Wetland
Freshwater Forested/Shrub Wetland
Freshwater Pond
Lake
Other
Riverine
Lower 48 Available Wetland Data
Non-Digital
Digital
No Data
Scan
NHD Streams
Counties 100K
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