NON-MOTORIZED TRANSPORTATION PLAN
FOR CHURCHTOWN, PENNSYLVANIA

Caernarvon Township, Lancaster County
2139 Main Street, Narvon, PA 17555

Date:
October 5, 2020

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Funding is provided by the Pennsylvania Department of Health through the State Physical Activity and Nutrition grant and Preventative Health and Health Services Block Grant from the Centers for Disease Control and Prevention.
Introduction

Community Background

Churchtown is a small community (village) located along Route 23 in the Caernarvon Township, Lancaster County, Pennsylvania. Churchtown is located between Berks County and the Pennsylvania Turnpike to the northeast, and New Holland/Blue Ball and Route 322 to the southwest. This places it within a major corridor for businesses and tourism. The area of Churchtown is also surrounded by a large Plain Sect community, which traditionally utilizes non-motorized means of transportation. This provides a challenge for providing a safe means for non-motorized modes of transportation.

The Village of Churchtown consists of approximately 91 parcels, as identified in the Churchtown Village District of the Official Zoning Map. (Reference Appendix I to view parcels in the Churchtown Historic District). At the time of this plan, the parcels are generally broken down as follows:

- Business/Public - 16
- Residential - 70
- Historic – 1
- Church/Religious - 2
- Recreational - 2

The Churchtown Zoning District also includes some parcels that are not technically located within the limits of the Village of Churchtown. The Village of Churchtown is surrounded by the Agricultural Zoning District.

Significant natural resources of Churchtown (and immediate surrounding area) are the Conestoga River, which lies to the south and west, and is a major part of Historic Poole Forge. The area is also known for its prime fertile agricultural soils and agricultural industry.

Benefits of Non-motorized Transportation

This plan considers non-motorized transportation modes as walking, running, and bicycling, as well as scooters, strollers, and wheelchairs. The different modes of non-motorized transportation can be utilized for recreation, reaching destination points, or commuting to work. Non-motorized transportation can provide the following benefits to a community and its residents:

- Increased exposure to historical and cultural resources.
- Increased exposure to local businesses creating healthy economic impacts.
- Increased public health benefits through physical activity and improved access to recreational facilities.
- Improved accessibility to business/recreational entities by non-motorized use.
- Improved air quality in community from reduced motorized transportation methods.
- Improved public health through recreational and physical activities.
Non-motorized means of transportation have both health and economic benefits to a community and its residents. Non-motorized transportation has been on the rise as people look to improve their personal health and improve the environment. It is anticipated that this trend will continue to rise as non-motorized means become more readily available in communities and people continue to rely more on non-motorized means to get to work, recreational facilities, business, and tourism destinations. Studies have shown that physical activities can reduce obesity, heart disease, diabetes and improve one’s overall mental health and mood.

**Plan Approach, Purpose and Goals**

Society has become dependent upon motorized modes of transportation for convenience and the inability, or in some cases the lack of desire, to utilize non-motorized modes of transportation. Caernarvon Township understands the associated health benefits of providing access to non-motorized transportation modes within the Village of Churctown and the Churctown Historic District.

This plan is a first step for the Township to utilize in identifying, prioritizing, and ultimately implementing non-motorized modes of transportation in the Churctown community. The plans goals are as follows:

- Provide safe, accessible connections between public, recreational, business and tourism destinations within the Village of Churctown and Churctown Historic District.
- Collect specific non-motorized transportation data, prioritize current and future short-term and long-term need versus want opportunities, and input from stakeholder group and public.
- Determine implementation methods (both public and private) to construct and install non-motorized transportation facilities.

**Public Involvement**

Caernarvon Township formed a stakeholder group to assist in the preparation of this plan. The stakeholder group contained individuals from Caernarvon Township (Board of Supervisors), Township employees, representatives from local business, local organizations (i.e. Historic Poole Forge), Lancaster County Planning Commission, Penn Medicine, PennDOT, and the consulting team. The stakeholder group participated in the planning process throughout the development of this plan. In addition, Caernarvon Township held special public meeting(s) that were for the residents of Churctown and surrounding community to provide input.

Two special meetings were held with the public. One special meeting was held in the preliminary stages of the Active Transportation Plan for the purpose of gathering the public’s thoughts on what improvements are considered critical, what improvements are essential, and what improvements are desired. This input, as well as that of the stakeholder’s group and consulting team, was utilized in preparing the preliminary Active Transportation Plan. The second special meeting was held with the public to review the draft Active Transportation Plan to ensure that the plan generally represents the desires of the community.
Existing Conditions / Data Collection and Analysis

Areas of Existing Sidewalk / Bike Routes / Trails

Sidewalk exists within the limits of the Village of Churchtown. It is located on both sides of Route 23. The existing sidewalk is generally in good shape; however, there are some deficiencies. Some locations are narrow with impediments (i.e. utility poles, mailboxes, etc.) that hinder ADA and public accessibility. The majority of the existing curb ramps also do not meet ADA requirements. (See Appendix VI, which references current PennDOT RC Standards, RC-67M Curb Ramps and Sidewalks). Some vegetation (i.e. shrubs and trees) also impede on the sidewalks that adversely impact the public’s use.

Appendix I of this Plan identifies the Churchtown Village District, as well as the existing typical cartway sections. (A cartway is defined as that portion of a street which is improved by surfacing with permanent or semi-permanent material and is intended for vehicular traffic).

Appendix II of this Plan identifies the existing sidewalk conditions mapping that depicts all properties in which sidewalk is present and designates a rating of “Good”, “Repair” or “Replace”. A field view was performed by the consulting team to verify the sidewalk conditions and deficiencies.

Appendix III of this Plan identifies the existing curb ramps that are not ADA compliant. A field view was performed by the consulting team to verify the curb ramp conditions and deficiencies. (See Appendix VI, which references current PennDOT RC Standards, RC-67M Curb Ramps and Sidewalks).

No bike routes are currently designated within the Village of Churchtown. Route 23 does have a wider shoulder on the south side, between Historic Poole Forge and the Village of Churchtown, that would accommodate bike usage. The cartway narrows within the Village of Churchtown, so bike usage must utilize the existing curbed cartway travel lanes.

No trails are located within the limits of the Village of Churchtown or the Churchtown Historic District. The old school property, located on the eastern side of Churchtown, has open green space where paths/trails could be implemented. A trail could be provided around the perimeter of the site with exercise amenities provided along the trail. Open green space could also remain and provide areas for other forms of exercise or outdoor activities. Historic Pool Forge, located on the western side of Churchtown, has limited trails/paths that provide access to activities within the park (i.e. pavilion, playground, etc.). The open green space of the park could potentially lend to implementation of additional paths or trails.

Data Collection and Analysis

Data from the U.S. Census was evaluated as a guide to the usage of existing motorized and non-motorized transportation demand within Churchtown. The following table represents this data:
Churchtown, Lancaster County, Pennsylvania

<table>
<thead>
<tr>
<th>SUBJECT</th>
<th>2018 ESTIMATE</th>
<th>PERCENTAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Workers 16 years or over</td>
<td>203</td>
<td>100</td>
</tr>
<tr>
<td>Male</td>
<td>131</td>
<td>64.5%</td>
</tr>
<tr>
<td>Female</td>
<td>72</td>
<td>35.5%</td>
</tr>
<tr>
<td><strong>Mode of Work</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Drove alone</td>
<td>132</td>
<td>65.0%</td>
</tr>
<tr>
<td>Carpooleed</td>
<td>22</td>
<td>10.8%</td>
</tr>
<tr>
<td>Public Transportation (excluding taxicab)</td>
<td>0</td>
<td>0.0%</td>
</tr>
<tr>
<td>Bicylce or walked</td>
<td>18</td>
<td>8.9%</td>
</tr>
<tr>
<td>Taxicab, motorcycle, or other mode</td>
<td>7</td>
<td>3.4%</td>
</tr>
<tr>
<td>Worked at home</td>
<td>24</td>
<td>11.8%</td>
</tr>
</tbody>
</table>

Source: U.S. Census Bureau’s 2018 American Community Survey, 5-Year Estimates

It should be noted that bicycling and walking trips are often for social, school, errands, recreation, and other types of trips that are not included in the US Census data. As people continue to transition (by choice or necessity) to non-motorized transportation methods, there will be a greater need for non-motorized facilities within the Village of Churchtown and surrounding area(s) within Caernarvon Township.

**Identification of Destinations and Connections / Project Selection, Evaluation and Design**

**Destinations and Connections**

Non-motorized modes of transportation can be for recreational purposes as well to get to a destination point (i.e. stores, work, medical, etc.). The Village of Churchtown contains numerous destination points, although it is limited in dedicated recreational facilities. The following table identifies destination points within the Village of Churchtown and Historic Churchtown District.

<table>
<thead>
<tr>
<th>Types of Destination Points</th>
<th>Access Via</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public Entities</td>
<td>Caernarvon Township Municipal Offices</td>
</tr>
<tr>
<td></td>
<td>Caernarvon Fire Company</td>
</tr>
<tr>
<td>Religious</td>
<td>Churchtown United Methodist Church and Cemetery</td>
</tr>
<tr>
<td></td>
<td>Bangor Episcopal Church</td>
</tr>
<tr>
<td>Lodging</td>
<td>Churchtown Inn Bed and Breakfast</td>
</tr>
<tr>
<td></td>
<td>The Inn at Twin Linden</td>
</tr>
<tr>
<td>Personal Care</td>
<td>Village Locksmith Hair Studio</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Historical</td>
<td>Caernarvon Historical Society</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Animal Care
- A&H Harness
- Gary P. Vandyke Vet
- Smucker Harness Company

Main Street (Route 23)
Existing Sidewalks

## Restaurant/Food
- Old Bakery House and Deli

Main Street (Route 23)
Existing Sidewalks

## Commercial
- Churchtown Supply
- Churchtown Automotive Repair
- Welsh Mountain Company
- Urban Southern
- Blue Ridge Furniture
- Village Barn Antiques

Main Street (Route 23)
Existing Sidewalks

## Recreational
- Historic Poole Forge
- Old School Property (Twp.)

Main Street (Route 23)
Existing Sidewalks
Proposed Sidewalks/Trail

### Projects and Preliminary Costs

Caernarvon Township considered the following factors in prioritizing projects:

- Benefit and necessity of improvement to create connection
- Stakeholder group and public input
- Ease of Implementation (Project Cost)

The Plans project prioritization was determined through the feedback from the stakeholder group, public input, and Township Commissions and Boards. The projects, as described in the following table, will need to be phased as funding becomes available.

### Priority Projects

<table>
<thead>
<tr>
<th>Project</th>
<th>Length</th>
<th>Description</th>
<th>Destinations</th>
<th>Notes</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Historic Poole Forge Connection</td>
<td>950 LF (Conc. Sidewalk &amp; Curb)</td>
<td>Installation of concrete sidewalk on south side of Route 23 from limits of existing sidewalk. Installation of trail/pathway within Historic Poole Forge.</td>
<td>Residents already walk this area to connect from Village of Churchtown to Historic Pool Forge</td>
<td>- Village of Churchtown - Historic Poole Forge</td>
<td>$325,000 (Curb &amp; Sidewalk)</td>
</tr>
<tr>
<td></td>
<td>1200 LF (Trail &amp; Pathway)</td>
<td></td>
<td></td>
<td>- Village of Historic Poole Forge</td>
<td>$235,000 (Trail &amp; Pathway)</td>
</tr>
<tr>
<td>Traffic Calming</td>
<td>±500 LF (2 locations)</td>
<td>Installation of traffic calming mechanism (i.e. center chicane, signage, and landscaping) creating a “gateway” at either entry point into Churchtown Historic District.</td>
<td>Village of Churchtown</td>
<td>Entry speed reduction on SR 0023 for safety</td>
<td>$50,000 (per location)</td>
</tr>
<tr>
<td>(Entrance to Churchtown Historic District)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ADA Curb Ramp Replacement / Installation</td>
<td>32 Existing ±3 Proposed</td>
<td>Replace (and/or install) ADA compliant curb ramps within Churchtown Historic District</td>
<td>Village of Churchtown</td>
<td>Improve ADA accessibility at intersections and accesses. Installation of 3 crosswalks.</td>
<td>$227,500 ($6,500 per Ramp)</td>
</tr>
</tbody>
</table>
Future Projects

<table>
<thead>
<tr>
<th>Project</th>
<th>Length</th>
<th>Description</th>
<th>Destinations</th>
<th>Notes</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main St (Rt 23) Sidewalk Repair*</td>
<td>7800 LF (Total Possible)</td>
<td>Repair existing sidewalk sections that are cracked, offsets, etc.</td>
<td>Village of Churchtown</td>
<td>Property owner’s responsibility.</td>
<td>$15 SF (Sidewalk) $35 LF (Curb)</td>
</tr>
<tr>
<td>Old School Property Trail</td>
<td>±9.4 Ac.</td>
<td>Provide walking path / trail with exercise stations; open green space</td>
<td>Recreational area</td>
<td>Twp. lead with private resident input or committee</td>
<td>TBD</td>
</tr>
</tbody>
</table>

Appendix IV of this Plan identifies the Priority and Future Projects.

*Additional routine improvement items on Main St (by property owners) include the following:

- Maintain existing sidewalk width (horizontally) by trimming vegetative growth encroaching onto sidewalk surface (i.e. grass, landscaping, etc.)
- Maintain existing sidewalk clearances (vertically) by trimming overhanging tree branches to a minimum height of 7-feet.
- Routinely clear existing sidewalks of built-up debris (i.e. stone/gravel, leaf and vegetative, roadside trash, snow, etc.).

Design Guidelines

Design elements shall be in accordance with Caernarvon Township Ordinances and PennDOT Specifications, Guidelines and Standards (i.e. PennDOT Publication 408, PennDOT RC Standards, PennDOT’s Pennsylvania Traffic Calming Handbook, etc.). Each identified project will have unique design approval processes (i.e. PennDOT Highway Occupancy Permits, NPDES Permitting, ESC, Environmental, DCNR, PHMC, PNDI, etc.), as it relates to the specific improvement.

Existing physical site conditions (i.e. utility poles, walls, buildings, slopes, drainage, etc.) may also dictate and provide challenges to the design elements of the projects. These conditions could require alternative design elements that are non-standard and/or require “special” approvals.

Policy and Implementation

Caernarvon Township should create a framework for both the private and public implementation so a focused effort can be facilitated by the Township. The following major stakeholders involved with the installation of non-motorized modes of transportation facilities include, but are not limited to:

- Property/Business Owners
- Caernarvon Township Municipal Government
- Pennsylvania Department of Transportation (PennDOT)
- Developers (limited options) / Property Re-Development
Caernarvon Township could use the following implementation methods for installation of non-motorized modes of transportation facilities:

- Requiring Developers (or property Redevelopers) to install or make improvements
- Funding sources (i.e. grants, grants with matching funds from public and/or private entities, etc.)
- Sidewalk Installation/Maintenance Ordinance to enforce private construction and maintenance of sidewalks
- Code enforcement

**Public Implementation**

The Village of Churchtown sits along Route 23 and is between the PA Turnpike (northeast) and Route 322 (southwest), which is a major corridor for business and tourism entering Lancaster County. The lack of connectivity and accessibility to destinations within the Churchtown area does not promote non-motorized means of transportation in a safe manner.

Public funding sources include federal, state, local and regional government (and quasi-government) grant and loan programs. Such programs may be offered on an annual basis or as one-time funding opportunities. The programs also may or may not require matching funds. Requiring residents and/or businesses to contribute to any match may be beneficial for the Township.

**Private Implementation**

Caernarvon Township views this plan as a collaborative plan with shared public/private initiative. This is based upon the stakeholder’s group, as well as public meetings for input that occurred during the preparation of the plan. Therefore, private property owners, developers and re-developers, and businesses are all considered part of the solution to implement this plan.

**Proposed Policies**

- Township should consider adopting and implementing a Sidewalk Ordinance making clear the responsibilities of the property owner.
- Township should consider the creation and adoption of an Official Map. An Official Map helps municipalities plan and prioritize community investments in open space and public facilities. Official Maps also assist in implementing elements of a Comprehensive Plan.
- Seek additional right-of-way/easements through the development (or redevelopment) plan submission process to accommodate future non-motorized facilities.
- Utilize existing sidewalk alignments where facilities are in good condition and/or constraints apply. Proposed facilities shall be sensitive to surrounding areas (properties) and designed accordingly to minimize adverse impacts to them.

**Potential Funding Sources**

See the following page(s) for a table of potential funding sources.
<table>
<thead>
<tr>
<th>Funding Program</th>
<th>Funding Entity</th>
<th>Type of Projects Funded/Guidelines</th>
<th>Award Amount</th>
<th>Minimum Match</th>
<th>Application Deadline</th>
</tr>
</thead>
</table>
| Lancaster County Community Development Block Grant  | U.S. Department of Housing and Urban Development (HUD)                          | * Funds are limited to construction costs only.  
* At least five percent (5%) of the cost of the construction contracts must be paid with non-CDBG funds.  
* Legal, advertising, right-of-way acquisition, engineering, and design (soft) costs are all the responsibility of the project sponsor.  
* The project area must be primarily residential.  
* All CDBG Projects must be designed to serve those areas of the community with the highest percentage of low and moderate income (LMI) persons, using current census data or recent income survey results.                                                                                                                                   | Maximum $200,000   | 20% Match Required                      | Letters of intent typically due in late winter/early spring followed by applications in spring |
<p>| Multimodal Fund                                     | PA Department of Community and Economic Development (DCED), through the Commonwealth Financing Authority (CFA) | Provides grants to encourage economic development and ensure safe and reliable systems of transportation. Funds may be used for transportation projects, including but not limited to, lighting, streetscape improvements, pedestrian safety, sidewalk enhancements, connectivity of transportation assets, and transit-oriented development. State Road projects are eligible to receive funding with documentation from the appropriate PennDOT Engineering District.                                                                                                           | Minimum total project cost $100,000 | 30% Local Match of the non-federal share of project costs is required. | Summer 2021 (TBD)                                           |
| Multimodal Fund                                     | Pennsylvania Department of Transportation                                      | Provides grants to ensure safe and reliable systems of transportation. Funds may be used for transportation projects, including but not limited to, lighting, streetscape improvements, pedestrian safety, sidewalk enhancements, connectivity of transportation assets, and transit-oriented development.                                                                                                                                                                                                                                                                     | $100,000 Minimum - $3 Million Maximum | 30% Local Match | November 6, 2020                                     |
| Transportation Alternatives (TA) Asset-Aside Program| PennDOT                                                                       | Transportation alternative projects include the construction of pedestrian and bicycle facilities; historic preservation and rehabilitation of historic transportation facilities; conversion of abandoned railway corridors to trails; and stormwater management.                                                                                                                                                                                                                                                                                                                                       | $50,000 Minimum - $1 Million Maximum | No match required; pre-construction costs for construction projects | Next round anticipated in 2021 (TBD)                            |</p>
<table>
<thead>
<tr>
<th>Funding Program</th>
<th>Funding Entity</th>
<th>Type of Projects Funded/Guidelines</th>
<th>Award Amount</th>
<th>Minimum Match</th>
<th>Application Deadline</th>
</tr>
</thead>
<tbody>
<tr>
<td>Smart Growth Transportation Program</td>
<td>Lancaster MPO</td>
<td>Transportation projects/studies located in Lancaster County's designated Growth Areas that support active transportation facilities. At least 80% of the funding will be directed to construction projects and no more than 20% to studies.</td>
<td>No maximum stated</td>
<td>20% match required for studies; pre-construction costs for construction projects</td>
<td>Next round anticipated in 2021 (TBD)</td>
</tr>
<tr>
<td>Transportation Alternatives Program</td>
<td>Lancaster MPO</td>
<td>Transportation alternative projects include the construction of pedestrian and bicycle facilities; historic preservation and rehabilitation of historic transportation facilities; conversion of abandoned railway corridors to trails; and stormwater management.</td>
<td>No maximum stated</td>
<td>20% match required for studies; pre-construction costs for construction projects</td>
<td>Next round anticipated in 2021 (TBD)</td>
</tr>
<tr>
<td>Community Conservation Partnerships Program (C2P2)</td>
<td>PA Department of Conservation and Natural resources (DCNR)</td>
<td>Provides funding for acquisition, planning, and development (construction) of trails, parks, and recreational facilities.</td>
<td>No maximum request; typically funds projects up to $350,000</td>
<td>Typically a 50% local match is required</td>
<td>Spring 2021</td>
</tr>
<tr>
<td>Greenways, Trails, and Recreational Program (GTRP)</td>
<td>Pennsylvania Department of Community and Economic Development (DCNR) through the Commonwealth Financing Authority (CFA)</td>
<td>Funding used for planning, acquisition, development, rehabilitation, and repair of greenways, recreational trails, open space, parks, and beautification projects.</td>
<td>$250,000 maximum</td>
<td>15% local match of the total project cost</td>
<td>Applications typically accepted between February 1st and May 31st each year.</td>
</tr>
<tr>
<td>Automated Red Light Enforcement (ARLE) Grant Program</td>
<td>PennDOT</td>
<td>Provides grants to local governments for transportation enhancement projects that focus on highway safety or mobility, and which can be completed at relatively low costs.</td>
<td>No maximum stated</td>
<td>Match encouraged but not required</td>
<td>June 30th each year</td>
</tr>
<tr>
<td>Funding Program</td>
<td>Funding Entity</td>
<td>Type of Projects Funded/Guidelines</td>
<td>Award Amount</td>
<td>Minimum Match</td>
<td>Application Deadline</td>
</tr>
<tr>
<td>----------------------------------</td>
<td>--------------------------</td>
<td>------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>-------------------------------</td>
<td>------------------</td>
<td>---------------------------------------------</td>
</tr>
<tr>
<td>AARP Community Challenge</td>
<td>AARP</td>
<td>Provides small grant funds to fund &quot;quick-action&quot; projects supporting the efforts of neighborhoods, towns, cities and rural areas to be great places for people of all ages. Encourages communities to provide safe, walkable streets, age-friendly housing and transportation options, access to needed services, and opportunities for residents of all ages to participate in community life.</td>
<td>No maximum stated</td>
<td>No match required</td>
<td>Applications due in mid-May 2021; Projects completed in mid-December 2021</td>
</tr>
<tr>
<td>Lancaster Bicycle Club Grant Program</td>
<td>Lancaster Bicycle Club</td>
<td>Provides grant funds to support bicycle related activities and initiatives. Funds may be used for facilities that directly improve bicycling, repairs and maintenance of bicycling facilities, advocacy for bicyclist's rights and safety, and programs promoting bicycling.</td>
<td>No minimum or maximum</td>
<td>No match required</td>
<td>December 1, 2020</td>
</tr>
</tbody>
</table>
Notes:

1. "Good" sidewalk is generally aged but does not have cracks, lips/offsets or other adverse impediments.

2. "Repair" sidewalk is generally minor consisting of cracks, lips/offsets or other impediments.

3. "Replace" sidewalk is generally in very poor conditions and requires complete removal and replacement.

4. There are encroachment impediments (i.e. utility poles, signs, mailboxes, vegetation, etc.) that are not specifically identified in this Appendix. Reference Appendix V for additional information.

5. Non-shaded properties do not contain sidewalks.
Notes:

1. This Appendix shows examples of encroachment impediments that occur throughout the Village of Churchtown.

2. These examples are not calling out a specific property, but are solely for the purpose to identify examples of encroachment impediments.
COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION
DEPARTMENT OF TRANSPORTATION
NEW CONSTRUCTION OR ALTERATION DETAILS
TYPE 6 CURB RAMPS

1. SIDE FLANGES 10000 MAX SLOPE.
2. SLOPE MIN 1:60.
3. CURB RAMP SLOPE PER 13-306 MUST BE A MAXIMUM OF 1:60.
4. RAMPрас 10000 MAX SLOPE.
5. TYPICAL DETECTABLE WALKING SURFACE.
6. DETECTABLE WALKING SURFACE 10000 MAX SLOPE.
7. DETECTABLE WALKING SURFACE 10000 MAX SLOPE.
8. DETECTABLE WALKING SURFACE 10000 MAX SLOPE.
9. DETECTABLE WALKING SURFACE 10000 MAX SLOPE.
10. DETECTABLE WALKING SURFACE 10000 MAX SLOPE.
BLENDED TRANSITION

RAMPED MEDIAN OR ISLAND ACCESS OPENING (TYPE A DOUBLE CURB RAMPS)

RAMPED MEDIAN OR ISLAND ACCESS OPENING (TYPE B DOUBLE CURB RAMPS)

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION
DEPARTMENT OF HIGHWAYS

CURB RAMPS AND SIDEWALKS
NEW CONSTRUCTION OR ALTERATION DETAILS
BLENDED TRANSITION / MEDIANS

RECOMMENDED DEC. 17, 2013
RECOMMENDED DEC. 17, 2013
SHI. 4 OF 11

RC-67M
SIDE FLARE RECONSTRUCTION

TOTAL RAMP RECONSTRUCTION

DETAIL ILLUSTRATES A TYPE I EXISTING RAMPS REPLACED WITH A TYPE II RAMP. THIS IS USED IN CONJUNCTION WITH A TYPE I RAMP.

TOTAL RAMP RECONSTRUCTION (RAMP TYPE CHANGE)

DETECTABLE WARNING SURFACE (DWS)
INSTALLATION INSTRUCTIONS
1. SAW OUT EXISTING CURB RAMP SURFACE WHERE THE DWS WILL BE PLACED.
2. REMOVE EXISTING CONCRETE FROM THIS AREA.
3. REPLACE AND COMPACT ANY DISTURBED CONCRETE.
4. PLACE NEW CONCRETE AND LEVEL TO A 1/4" PER FOOT. SPRAWL THE CONCRETE TO THE ENDING DEPTH OF THE DWS MATERIAL.
5. CLEAN THE SURFACE AND LEAVE IT IN AN IMPINGED CONDITION.
6. SWEEP AND DRY CONCRETE WHERE THE DWS WILL BE INSTALLED.
7. PLACE DWS UNITS ACROSS THE ENTIRE WIDTH OF THE NEW CONCRETE.
8. PRESS UNITS INTO THE NEW CONCRETE TO A 1/4" PER FOOT.
9. ALLOW UNITS TO HARDEN AND REPLACE THE EXISTING CONCRETE.
10. INSTALL A NEW CURB RAMP.
11. INSTALL A NEW CURB RAMP.
COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION
DEPARTMET OF PUBLIC APPLIANCE
CURB RAMPS AND SIDEWALKS
DRIVEWAY APRONS

1. SIDE PLANES TO 0.02 WAX SLOPE.
2. 0.333 MAX RAMP SLOPE, SEE NOTE B, SHEET 1.
3. 0.02 MAX CHANGE IN GRADE BETWEEN ROAD SURFACE AND DEPRESS.
4. DEPRESS SIDEWALK FROM 0.5" - 0.75"
(SEE NOTE 25, SHEET 1)
5. 0.02 MAX CHANGE IN GRADE BETWEEN DEPRESS ON SURFACE AND SIDEWALK.

TYPE 2
DRIVEWAY APRON

TYPE 2A
DRIVEWAY APRON

TYPE 3
DRIVEWAY APRON

TYPE 4
DRIVEWAY APRON
COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION
Bureau of Providing Deliveries
CURB RAMPS AND SIDEWALKS
DRIVEWAY APRONS

SECTION A-A
SECTION B-B
SECTION C-C
SECTION D-D
SECTION E-E

TYPE 5
MULTIPLE DRIVEWAYS

TYPE 5A
MULTIPLE DRIVEWAYS

2' 0" MAX. CURB HEIGHT
2' 0" MAX.

6" CONCRETE
SURFACE

6" CONCRETE
SURFACE

6" AGGREGATE
SURFACE

6" AGGREGATE
SURFACE

COMMON CEMENT
CONCRETE CURB

DRIVEWAY
PEDESTRIAN ACCESS ROUTE

SIDEWALK WIDTH

HIGHWAY

2' 0" MAX. CURB HEIGHT
2' 0" MAX.

6" CONCRETE
SURFACE

6" CONCRETE
SURFACE

6" AGGREGATE
SURFACE

6" AGGREGATE
SURFACE

COMMON CEMENT
CONCRETE CURB

DRIVEWAY
PEDESTRIAN ACCESS ROUTE

SIDEWALK WIDTH
