WAYNE GLEN
(also known as the Richter Property)
A model Low Impact Development (LID) community.

Conditional Use
Design Concept Presentation
Tredyffrin Township Planning commission
May 16, 2013
TCS Overlay District proposal description.

In the Trout Creek Stormwater Overlay District (TCS), and as part of a conditional use application, the applicant shall identify the specific public stormwater improvements being proposed.

Plans and/or documentation shall be submitted in sufficient detail to: [Added 10-1-2012 by Ord. No. HR-396]

a) **Present the proposed general layout** for the tract, including the:
   - project-specific and public stormwater improvements,
   - buildings,
   - streets,
   - landscaping or screening,
   - vehicular and pedestrian circulation, and
   - parking and
   - explain the proposed land use(s), with a table listing the amount of total nonresidential square footage and/or the total number of dwelling units,
Project Layout: Proposed land uses

<table>
<thead>
<tr>
<th>Residential</th>
<th>113 units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Townhomes</td>
<td>58 units</td>
</tr>
<tr>
<td>Carriage Homes</td>
<td>55 units</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Non-residential</th>
<th>240,000 sq. ft.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gross office building area</td>
<td>240,000 sq. ft.</td>
</tr>
<tr>
<td>* Maximum potential restaurant area within gross office building area</td>
<td>10,000 sq. ft.</td>
</tr>
</tbody>
</table>

This diagram is illustrative for presentation purposes only and is subject to revision.
Stormwater design demonstrates the site’s ability to comply with TCS Overlay’s performance requirements.

<table>
<thead>
<tr>
<th>DEVELOPMENT VOLUME CONTROL</th>
<th>Required</th>
<th>Provided</th>
</tr>
</thead>
<tbody>
<tr>
<td>100% OF THE 2-YR/24 HR STORM</td>
<td>179,858 cubic feet</td>
<td>218,511 cubic feet</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>DEVELOPMENT RATE CONTROL:</th>
<th>Exceed Ch. 174 requirements by:</th>
<th>Minimum exceedance:</th>
</tr>
</thead>
<tbody>
<tr>
<td>EXCEED CH. 174 BY 50%</td>
<td>50%</td>
<td>58%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>REGIONAL BASIN RATE CONTROL:</th>
<th>Rate reduction in Trout Creek Study:</th>
<th>Rate reduction:</th>
</tr>
</thead>
<tbody>
<tr>
<td>MEET THE TROUT CREEK STUDY’S PERFORMANCE</td>
<td>- 2 yr storm: 5% - 100 yr storm: 20%</td>
<td>- 2 yr storm: 6% - 100 yr storm: 25%</td>
</tr>
</tbody>
</table>

All future revisions will still comply with requirements.
Project Layout: Project-specific and public stormwater improvements

Regional basin

LEGEND
- REGIONAL STORMWATER BASIN
- BIO RETENTION AREAS
- UNDERGROUND BASIN
- BUILDING GREEN ROOF
- PERMEABLE PAVING - SIDEWALK
- PERMEABLE PAVING - ALLEY/DRIVEWAY
- MEADOW AREAS
- FORESTED AREAS
Regional Stormwater Basin.
Bio-retention

Lebanon Valley College – Lebanon County, PA
Underground basins.

Green roof.

Penn Medicine – Tredyffrin, PA

The Court at Upper Providence – Royersford, PA
Permeable paving with sub-grade infiltration throughout the site.
Alleys, driveways, parallel parking spaces, sidewalks, intersections.

Walkways and plazas

Parking lots and drives

Pave Drain cross section
Meadow areas, Rain Gardens and Bioswales around the site.

Lebanon Valley College – Lebanon County, PA

Bio-swales behind some homes
Meadow areas, Rain Gardens and Bioswales around the site.
Integration of ruins on the site.

Bridge abutment ruins.

Wall next to demolished former house.

Tree preservation.
**Project Layout: Streets / Vehicular Circulation.**

- Two-way 28’ wide cartway
- Two-way 20’ wide cartway
- One-way 16’ wide cartway
- 12’ wide common drive
- 12’ wide rear alley
- Parallel parking spaces (7’ x 22”)
- Emergency vehicle access (not intended for regular vehicular use)

*This diagram is illustrative for presentation purposes only and is subject to revision.*
Project Layout: Pedestrian Circulation.

- 4' sidewalk along street
- 4' open space walkway
- Road pedestrian crossing
- 12' wide common drive
- Pedestrian trail
- Emergency vehicle access (not intended for regular vehicular use)

This diagram is illustrative for presentation purposes only and is subject to revision.
Project Layout: Buildings

This diagram is illustrative for presentation purposes only and is subject to revision.
Carriage home design concepts.

Bldg 1: Front entry / side entry garages split

This elevation is to demonstrate design intent and is subject to revision.
Carriage home design concepts.

Bldg 1: Front entry / side entry garages split

This elevation is to demonstrate design intent and is subject to revision.
Carriage home building concepts.

Bldg 2: Front entry / side entry garages together
Townhome building design concepts.
24’ wide, 3-story townhomes.

Alley entry garage.
Townhome building design concepts.
24’ wide, 3-story townhomes.

Front entry garage.
Park structures with Chester County design influence.

Diamond Rock School House, Tredyffrin Township

School house at Valley Forge National Historic Park
Project Layout: Landscaping and Screening – Office.

- Perimeter Screening
- Landscaped entrance
- Parking lot landscaping
- Green roofs

This diagram is illustrative for presentation purposes only and is subject to revision.
Project Layout: Landscaping and Screening – Residential.

- Perimeter Screening
- Landscaped entrance
- Pocket parks
- Streetscapes

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Project Layout: Landscaping or Screening.

Berm and landscaped edge along Walker Road.

- View from Walker to be improved.
- Trail connection to Glenhardie Country Club.
- Emergency access to Walker Road.

This diagram is illustrative for presentation purposes only and is subject to revision.
Berm / screening for neighbors

This diagram is illustrative for presentation purposes only and is subject to revision.

Arcadia Land Company 114 Forrest Avenue Narberth, P.A. 610-664-0270

May 16, 2013 25
Sample of proposed long term view from Walker Rd.

Decorative landscape boulders integrated into berm.

Images are illustrative for presentation purposes only and are subject to revision.
Project Layout: Landscaping or Screening – Townhomes.

- Buffer / screening along perimeter.
- Bio-swale at the rear of units.
- Emergency access connection.
- Sidewalks on one side.
- Alley loaded internally and front loaded on perimeter.

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Project Layout: Landscaping or Screening – Carriage Homes.

- Buffer along perimeter.
- Sidewalks on one side.
- Pedestrian connection to country club.
- Stormwater best management practices used around the site.
- Landscaped entry sequence.

This diagram is illustrative for presentation purposes only and is subject to revision.
Project Layout: Landscaping or Screening – Entrance.

- Street trees lining entry with stormwater wetlands behind them.
- Mail shelter / school bus shelter provides a gathering place along the entry road.
- Landscape buffering.

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Design Concept Presentation
Tredyffrin Township Planning commission
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Conditional Use
SALDO Waivers
Tredyffrin Township Planning Commission
May 16, 2013
SALDO waivers are encouraged by the TCS Overlay Ordinance. 208-160. “Flexibility in granting waivers from Chapter 181, Subdivision and Land Development, to reduce impervious coverage and improve stormwater management will be encouraged.”

- Conservation provisions
- Dimensional provisions

Improvements to stormwater management through construction of extraordinary facilities requires nearly full site disturbance as well as Low Impact Development (LID) improvement techniques.

SALDO waivers will enable a better plan:
1. Clustering of development on the site so that more land area can be used exclusively for storm water management (regional and other basins)
2. Reduced impervious from site improvements.
3. Reduced long term maintenance with less improvement.
4. Reduced speeds resulting in increased pedestrian safety.
5. Improved and more varied urban design.
Narrower streets reduce impervious and increase safety.
181-46 F(4) Min. ROW & cartway widths.

Proposed cartway widths with no right of way:
- Two-way 28’ wide cartway
- Two-way 20’ wide cartway
- One-way 16’ wide cartway
- 12’ wide common drive
- 12’ wide rear alley
- Parallel parking spaces (7’ x 22’)
- Emergency vehicle access (not intended for regular vehicular use)

181-46 F (4). The minimum rights-of-way and cartway widths for all streets shall be as follows, except where greater widths are required by state or federal highway departments:

<table>
<thead>
<tr>
<th>Street Type</th>
<th>Right-of-Way (ft)</th>
<th>Paved Cartway (ft)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Local residential/service</td>
<td>50</td>
<td>28</td>
</tr>
</tbody>
</table>

This diagram is illustrative for presentation purposes only and is subject to revision.
Proposed Road Design Standards:
Two way: 20’ cartway + 7’ parallel parking bump-outs

<table>
<thead>
<tr>
<th>Street Type</th>
<th>Minimum Paved Cartway</th>
</tr>
</thead>
<tbody>
<tr>
<td>Two Way Internal Street</td>
<td>27’ total width with parking:</td>
</tr>
<tr>
<td></td>
<td>• 20’ cartway</td>
</tr>
<tr>
<td></td>
<td>• 7’ parallel parking bump-outs</td>
</tr>
<tr>
<td>One Way Internal Street</td>
<td>23’ total width with parking:</td>
</tr>
<tr>
<td></td>
<td>• 16’ cartway</td>
</tr>
<tr>
<td></td>
<td>• 7’ parallel parking bump-outs</td>
</tr>
<tr>
<td>Alley</td>
<td>12’ cartway</td>
</tr>
</tbody>
</table>

Street Design References

- **Local Road “Medium” or “Narrow” residential streets: 26’ - 30’**
  
  *Smart Transportation Guidebook: Planning and Designing Highways and Streets that Support Sustainable and Livable Communities.* New Jersey Department of Transportation and Pennsylvania Department of Transportation, March 2008.

- **“Street” with two-way travel lanes and 2 sided parking: 26’**
  

- **Recommended Pavement Width for two-way travel lanes and 1 parking lane: 22’ - 26’**
  
Proposed Road Design Standards:

One way: 16’ cartway + 7’ parallel parking bump-outs

<table>
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<td></td>
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<td>Alley</td>
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Street Design References for

- **Recommended Pavement Width for 1 one-way travel lane and 1 parking lane:** 18’

- **“Lane” with 1 one-way travel lane and 1 parking lane:** 16’ - 18’

Proposed Road Design Standards: One way alley: 12’ cartway

<table>
<thead>
<tr>
<th>Street Type</th>
<th>Minimum Paved Cartway</th>
</tr>
</thead>
</table>
| Two Way Internal Street | 27’ total width with parking:  
|                      | • 20’ cartway  
|                      | • 7’ parallel parking bump-outs                             |
| One Way Internal Street | 23’ total width with parking:  
|                      | • 16’ cartway  
|                      | • 7’ parallel parking bump-outs                             |
| Alley                | 12’ cartway                                               |

Street Design References for

- “Alley” with two-way traffic: **12’**  

- “Alley” with two-way traffic: **10’ - 12’**  
Tredyffrin road width comps: Arbordeau Condos.

120 unit gated condominium community

Street width:
20’ two-way with no parallel parking
(20’ two-way + 7’ parallel parking for Wayne Glen)
Tredyffrin road width comps: The Ponds of Chesterbrook.

48 unit townhome community in Chesterbrook.
Street width:
20’ two-way with no parallel parking
(20’ two-way + 7’ parallel parking for Wayne Glen)
Road width comps: Newtown Station
Toll Brothers townhome community in Newtown, Bucks County, PA.

- Street width:
  27 = 19’ two-way + 8’ parking bump-outs.
  (27’ = 20’ two-way + 7 parking bump-outs for Wayne Glen)
- Front yard: 6’ – 8’ to primary building
  - 3’ – 5’ to raised front stoop
  - 4’ paver sidewalk next to cartway.
- Shared drive: 12’ (same as Wayne Glen)
Road width comps: Haverford Court
14 unit infill townhome community under construction in Lower Merion Township, PA.

• Street width: 22’ two-way cartway with parallel parking. (27’ = 20’ two-way + 7 parking bump-outs for Wayne Glen)

• Rear alley: 10’ (12’ alleys for Wayne Glen)

• Driveways: 14’ (18’ for Wayne Glen)

• Permeable paving for walks
Project Layout: Pedestrian Circulation.

- 4’ sidewalk along street
- 4’ open space walkway
- Road pedestrian crossing
- 12’ wide common drive
- Pedestrian trail

Emergency vehicle access
(not intended for regular vehicular use)

7’ off cartway
Next to parking

Next to cartway

This diagram is illustrative for presentation purposes only and is subject to revision.
Sidewalks on one side of the street to reduce impervious.

Proposed sidewalks:
• Permeable paving material.
• Located next to street or parallel parking.
• Located on one side of the street.

• **Clustering:** Location next to street / parking allows for a tighter layout.

• **Impervious reduction:** One side of street provides ½ the impervious coverage.

Design Reference:
• “**Principle No. 13:** More flexible sidewalk standards: Where practical, consider locating sidewalks on only one side of the street and providing common walkways linking pedestrian areas.”

Stormwater Management Resource Center’s “Introduction to Better Site Design” presentation outlining 22 model principles for land development.

[http://www.stormwatercenter.net/Slideshows/bsd%20for%20smrc/sld066.htm](http://www.stormwatercenter.net/Slideshows/bsd%20for%20smrc/sld066.htm)
Subdivisions with sidewalks next to the road.

Willowmere – Upper Dublin, Montgomery County, Pa

Bazley Court – Newtown, Bucks County

Whitehall – Bryn Mawr, Lower Merion, PA
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3. Reduced long term maintenance with less improvement.

4. Reduced speeds resulting in increased pedestrian safety.

5. Improved and more varied urban design.
Proposed Wayne Glen plan.
SALDO compliant.
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SALDO Waivers

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May 16, 2013