Purpose of Checklist:

The State Environmental Policy Act (SEPA) chapter 43.21C RCW, requires all governmental agencies to consider the environmental impacts of a proposal before making decisions. An Environmental Impact Statement (EIS) must be prepared for all proposals with probable significant adverse impacts on the quality of the environment. The purpose of this checklist is to provide information to help you and the agency identify impacts from your proposal (and to reduce or avoid impacts from the proposal, if it can be done) and to help the agency decide whether an EIS is required.

Instructions for Applicants:

This environmental checklist asks you to describe some basic information about your proposal. Governmental agencies use this checklist to determine whether the environmental impacts of your proposal are significant, requiring preparation of an EIS. Answer the questions briefly, with the most precise information known, or give the best description you can.

You must answer each question accurately and carefully, to the best of your knowledge. In most cases, you should be able to answer the questions from your own observations or project plans without the need to hire experts. If you really do not know the answer, or if a question does not apply to your proposal, write "do not know" or "does not apply." Complete answers to the questions now may avoid unnecessary delays later.

Some questions ask about governmental regulations, such as zoning, shoreline, and landmark designations. Answer these questions if you can. If you have problems, the governmental agencies can assist you.

The checklist questions apply to all parts of your proposal, even if you plan to do them over a period of time or on different parcels of land. Attach any additional information that will describe your proposal or its environmental effects. The agency to which you submit this checklist may ask you to explain your answers or provide additional information reasonably related to determining if there may be significant adverse impact.

Use of checklist for nonproject proposals:

Complete this checklist for nonproject proposals, even though questions may be answered "does not apply."

IN ADDITION, complete the SUPPLEMENTAL SHEET FOR NONPROJECT ACTIONS (Part D).

For nonproject actions, the references in the checklist to the words "project," "applicant," and "property or site" should be read as "proposal," "proposer," and "affected geographic area," respectively.
A. BACKGROUND

1. Name of proposed project: "Wonderground" Building

2. Applicant: North Lincoln LLC, DBA "Wonderground"

3. Address: 815 N. Lincoln Street
   City/State/Zip: Spokane, WA 99201 Phone: 303-718-1617
   Agent or Primary Contact: David Wilde, Wolfe Architectural Group
   Address: 1015 N. Calispel
   City/State/Zip: Spokane, WA 99201 Phone: 509-455-6999
   Location of Project: Spokane WA
   Address: 815 N. Lincoln Street
   Section: 18 Quarter: NW Township: 25N Range: 43E
   Tax Parcel Number(s) 35182.4401

4. Date checklist prepared: September 25, 2023

5. Agency requesting checklist: City of Spokane

6. Proposed timing or schedule (including phasing, if applicable): October - December 2023

7. a. Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain.
   No

   b. Do you own or have options on land nearby or adjacent to this proposal? If yes, explain.
   Yes, Own 35182.4407, 35182.4408, 35182.4304, & 35182.4305

8. List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal.
   Spokane Environmental Decision B2313706SEPA
   See attached notice of decision
9. Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain. _______________________

Prior Demolition Permit

Current Building Permit Application

10. List any government approvals or permits that will be needed for your proposal, if known. ______

City Building Permit

11. Give brief, complete description of your proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page. __________

Site grading, footings, and foundations for a 1-story Building to contain indoor Pickleball play courts and Future TI space.

12. Location of the proposal: Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, township and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit application related to this checklist. ___

815 N. Lincoln St. Spokane, WA 99201

See attached map

13. Does the proposed action lie within the Aquifer Sensitive Area (ASA)? The General Sewer Service Area? The Priority Sewer Service Area? The City of Spokane? (See: Spokane County’s ASA Overlay Zone Atlas for boundaries.) __________________________

Aquifer Sensitive Area, General sewer service area & City of Spokane
14. The following questions supplement Part A.

a. Critical Aquifer Recharge Area (CARA) / Aquifer Sensitive Area (ASA)

(1) Describe any systems, other than those designed for the disposal of sanitary waste installed for the purpose of discharging fluids below the ground surface (includes systems such as those for the disposal of stormwater or drainage from floor drains). Describe the type of system, the amount of material to be disposed of through the system and the types of material likely to be disposed of (including materials which may enter the system inadvertently through spills or as a result of firefighting activities).

Storm water to be detained on-site and discharged into city's storm system at a peak rate of 0.05 cubic feet per second.

Interior Floor drains to City of Spokane Sanitary Sewer

(2) Will any chemicals (especially organic solvents or petroleum fuels) be stored in aboveground or underground storage tanks? If so, what types and quantities of material will be stored?

No

(3) What protective measures will be taken to insure that leaks or spills of any chemicals stored or used on site will not be allowed to percolate to groundwater. This includes measures to keep chemicals out of disposal systems.

None required, all drains to city sanitary sewer.

(4) Will any chemicals be stored, handled or used on the site in a location where a spill or leak will drain to surface or groundwater or to a stormwater disposal system discharging to surface or groundwater?

No.
b. Stormwater

(1) What are the depths on the site to groundwater and to bedrock (if known)?

Bedrock is at <10' from surface, groundwater level is unknown.

(2) Will stormwater be discharged into the ground? If so, describe any potential impacts.

B. ENVIRONMENTAL ELEMENTS

1. Earth

a. General description of the site (check one):

☐ Flat  ☒ Rolling  ☐ Hilly  ☐ Steep slopes  ☐ Mountainous

Other: ____________________________________________________________

b. What is the steepest slope on the site (approximate percent slope)?  < 5%

C. What general types of soils are found on the site (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any agricultural land of long-term commercial significance and whether the proposal results in removing any of these soils.

Rock. No agricultural soils

d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe.

No
e. Describe the purpose, type, total area, and approximate quantities and total affected area of any filling, excavation, and grading proposed. Indicate source of fill: ________________________________

Imported structural fill, 14,400 sf, approximately 1000 yards

________________________________________________________________________

f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe. ______

No

________________________________________________________________________

100%

________________________________________________________________________

h. Proposed measures to reduce or control erosion or other impacts to the earth, if any: ______

Erosion Control Plan (attached)

________________________________________________________________________

2. Air

a. What type of emissions to the air would result from the proposal during construction, operation, and maintenance when the project is completed? If any, generally describe and give approximate quantities if known. ______________

Dust During construction

________________________________________________________________________

b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe. __________________________

No

________________________________________________________________________
c. Proposed measures to reduce or control emissions or other impacts to air, if any: ____________________________
   Water will be sprayed during compaction of engineered fill to minimize dust
   ____________________________________________________________
   ____________________________________________________________
   ____________________________________________________________

3. Water

a. SURFACE WATER:

(1) Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into. ____________________________
   No.
   ____________________________________________________________
   ____________________________________________________________
   ____________________________________________________________

(2) Will the project require any work over, in, or adjacent to (within 200 feet) the described waters? If yes, please describe and attach available plans. ____________________________
   No
   ____________________________________________________________
   ____________________________________________________________
   ____________________________________________________________

(3) Estimate the amount of fill and dredge material that would be placed in or removed from the surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material. ____________________________
   none
   ____________________________________________________________
   ____________________________________________________________
   ____________________________________________________________

(4) Will the proposal require surface water withdrawals or diversions? If yes, give general description, purpose, and approximate quantities if known. ____________________________
   no
   ____________________________________________________________
   ____________________________________________________________
   ____________________________________________________________
(5) Does the proposal lie within a 100-year floodplain? If so, note location on the site plan. ______
No

(6) Does the proposal involve any discharge of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge. ________________
No

b. GROUNDWATER:

(1) Will groundwater be withdrawn from a well for drinking water or other purposes? If so, give a general description of the well, proposed uses and approximate quantities withdrawn from the well. Will water be discharged to groundwater? Give general description, purpose, and approximate quantities if known. ________________________________
Water used for dust control will come from the city of Spokane water system

(2) Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: Domestic sewage; industrial, containing the following chemicals...; agricultural; etc.). Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve. ________________________________
None
c. WATER RUNOFF (INCLUDING STORMWATER):

(1) Describe the source of runoff (including stormwater) and method of collection and disposal if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe. 

All stormwater to be collected and detained on site, and discharged to the city's storm system per stormwater variance application (see attached)

(2) Could waste materials enter ground or surface waters? If so, generally describe. 

No

(3) Does the proposal alter or otherwise affect drainage patterns in the vicinity of the site? If so, describe.

No

d. PROPOSED MEASURES to reduce or control surface, ground, and runoff water, and drainage patter impacts, if any.

Currently building stormwater drains directly to city sanitary sewer, and surface stormwater sheds into right-of-way.

The proposed design will reduce or eliminate these impositions on the city's storm and sanitary sewer systems
4. Plants

a. Check the type of vegetation found on the site:

Deciduous tree: ☐ alder ☐ maple ☐ aspen

Other: __________________________________________________________

Evergreen tree: ☐ fir ☐ cedar ☐ pine

Other: __________________________________________________________

☐ Shrubss ☐ Grass ☐ Pasture ☐ Crop or grain

☐ Orchards, vineyards or other permanent crops

Wet soil plants: ☐ cattail ☐ buttercup ☐ bullrush ☐ skunk cabbage

Other: __________________________________________________________

Water plants: ☐ water lily ☐ eelgrass ☐ milfoil

Other: __________________________________________________________

Other types of vegetation: weeds

b. What kind and amount of vegetation will be removed or altered? ______________________________

None

_______________________________________________________________________________

_______________________________________________________________________________

_______________________________________________________________________________

_______________________________________________________________________________

c. List threatened and endangered species known to be on or near the site. ______________________________

None known

_______________________________________________________________________________

_______________________________________________________________________________

_______________________________________________________________________________

_______________________________________________________________________________

d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any: ______________________________

The proposed Design will add street trees and sidewalk plantings within right-of-way

_______________________________________________________________________________

_______________________________________________________________________________

_______________________________________________________________________________

_______________________________________________________________________________
e. List all noxious weeds and invasive species known to be on or near the site. __________________________
   None

5. Animals

a. Check and List any birds and other animals which have been observed on or near the site or are known to be on or near the site:
   Birds: □ hawk □ heron □ eagle □ songbirds
   Other: Sparrows
   Mammals: □ deer □ bear □ elk □ beaver
   Other: None
   Fish: □ bass □ salmon □ trout □ herring □ shellfish
   Other: None
   Other (not listed in above categories): __________________________

b. List any threatened or endangered animal species known to be on or near the site.
   None known

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  ___
e. List any invasive animal species known to be on or near the site. ____________________________
   None known
   ____________________________________________
   ____________________________________________
   ____________________________________________
   ____________________________________________

6. Energy and natural resources

a. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc.
   Electric and natural gas.
   ____________________________________________
   ____________________________________________
   ____________________________________________
   ____________________________________________

b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.
   No
   ____________________________________________
   ____________________________________________
   ____________________________________________
   ____________________________________________

c. What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any:
   Enhanced building envelope & reduced energy lighting
   ____________________________________________
   ____________________________________________
   ____________________________________________
   ____________________________________________

7. Environmental health

a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste that could occur as a result of this proposal? If so, describe. 
   None
(1) Describe any known or possible contamination at the site from present or past uses. 

None. Existing building has been tested and abatement performed prior to building demolition.

(2) Describe existing hazardous chemicals/conditions that might affect project development and design. This includes underground hazardous liquid and gas transmission pipelines located within the project area and in the vicinity.

None.

(3) Describe any toxic or hazardous chemicals/conditions that might be stored, used, or produced during the project’s development or construction, or at any time during the operating life of the project.

None.

(4) Describe special emergency services that might be required.

None.

(5) Proposed measures to reduce or control environmental health hazards, if any:

None.
b. **NOISE:**

(1) What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)?

None

(2) What types and levels of noise would be created by or associated with the project on a short-term or a long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from the site.

Construction noise to be restricted to daytime working hours.

Future business tenants to comply with city ordinances

(3) Proposed measure to reduce or control noise impacts, if any:

None

8. **Land and shoreline use**

a. What is the current use of the site and adjacent properties? Will the proposal affect current land uses on nearby or adjacent properties? If so, describe.

Commercial use.

Will not affect adjacent current land use

b. Has the project site been used as working farmlands or working forest lands? If so, describe. How much agricultural or forest land of long-term commercial significance will be converted to other uses as a result of the proposal, if any? If resource lands have not been designated, how many acres in farmland or forest land tax status will be converted to nonfarm or nonforest use?

No
1) Will the proposal affect or be affected by surrounding working farm or forest land normal business operations, such as oversize equipment access, the application of pesticides, tilling, and harvesting? If so, how: ____________________________________________________________

No

______________________________________________________________________________

______________________________________________________________________________

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c. Describe any structures on the site. ____________________________________________

1 existing building, demolished under prior permit

______________________________________________________________________________

______________________________________________________________________________

______________________________________________________________________________

______________________________________________________________________________

d. Will any structures be demolished? If so, which? ________________________________

Yes, under prior permit and SEPA.

______________________________________________________________________________

______________________________________________________________________________

______________________________________________________________________________

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e. What is the current zoning classification of the site? ____________________________

DTG Downtown General

______________________________________________________________________________

______________________________________________________________________________

______________________________________________________________________________

______________________________________________________________________________

f. What is the current comprehensive plan designation of the site? __________________

Downtown

______________________________________________________________________________

______________________________________________________________________________

______________________________________________________________________________

______________________________________________________________________________

g. If applicable, what is the current shoreline master program designation of the site? __________

None

______________________________________________________________________________

______________________________________________________________________________

______________________________________________________________________________

______________________________________________________________________________
h. Has any part of the site been classified as a critical area by the city or the county? If so, specify. __
   No ______________________________________________________________________________________
   ______________________________________________________________________________________
   ______________________________________________________________________________________

i. Approximately how many people would reside or work in the completed project? ________________
   10 or fewer employees ______________________________________________________________________
   ______________________________________________________________________________________
   ______________________________________________________________________________________

j. Approximately how many people would the completed project displace? ________________
   None __________________________________________________________________________________
   ______________________________________________________________________________________
   ______________________________________________________________________________________

k. Proposed measures to avoid or reduce displacement impacts, if any: ____________________________
   None __________________________________________________________________________________
   ______________________________________________________________________________________
   ______________________________________________________________________________________

l. Proposed measures to ensure the proposal is compatible with existing and projected land uses and
   plans, if any: __________________________________________________________________________
   Proposed land use is compatible with zoning codes, land use plan, and adjacent existing land uses.
   ______________________________________________________________________________________
   ______________________________________________________________________________________
   ______________________________________________________________________________________

m. Proposed measures to ensure the proposal is compatible with nearby agricultural and forest lands
   of long-term commercial significance, if any: ____________________________
   None __________________________________________________________________________________
   ______________________________________________________________________________________
   ______________________________________________________________________________________
9. **Housing**

a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing.

   - None

b. Approximately how many units, if any, would be eliminated? Indicate whether high-, middle- or low-income housing.

   - None

c. Proposed measures to reduce or control housing impacts, if any:

   - None

10. **Aesthetics**

a. What is the tallest height of any proposed structure(s), not including antennas; what is the principal exterior building material(s) proposed?

   - 34' (from low end of site), Brick and architectural metal panels

b. What views in the immediate vicinity would be altered or obstructed?

   - None

c. Proposed measures to reduce or control aesthetic impacts, if any:

   - Compliance with City of Spokane Design Standards
11. Light and Glare

a. What type of light or glare will the proposal produce? What time of day would it mainly occur? ___
   Exterior lighting from dusk to dawn
   ____________________________________________________________
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b. Could light or glare from the finished project be a safety hazard or interfere with views? _________
   no
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   Proposed measures to reduce or control light and glare impacts, if any: _____________________________
   Exterior lighting to comply with city standards for cut-off
   ____________________________________________________________
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12. Recreation

a. What designated and informal recreational opportunities are in the immediate vicinity? _________
   Riverfront Park, Wonder Market, Spokane Arena, Centennial Trail
   ____________________________________________________________
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b. Would the proposed project displace any existing recreational uses? If so, describe. _____________
   No
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   Proposed measures to reduce or control impacts on recreation, including recreation opportunities to
   be provided by the project or applicant, if any: _____________________________
   None, the building will provide space for year-round indoor recreational activities.
   ____________________________________________________________
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13. Historic and cultural preservation

a. Are there any buildings, structures, or sites, located on or near the sited that are over 45 years old listed in or eligible for listing in national, state, or local preservation registers located on or near the site? If so, specifically describe. ________________________________________________________________
   Wonder Building at 835 N Post.
   ________________________________________________________________
   ________________________________________________________________
   ________________________________________________________________
   ________________________________________________________________
   ________________________________________________________________

b. Are there any landmarks, features, or other evidence of Indian or historic use or occupation? This may include human burials or old cemeteries. Are there any material evidence, artifacts, or areas of cultural importance on or near the site? Please list any professional studies conducted at the site to identify such resources. ________________________________________________________________
   No
   ________________________________________________________________
   ________________________________________________________________
   ________________________________________________________________
   ________________________________________________________________
   ________________________________________________________________
   ________________________________________________________________

c. Describe the methods used to assess the potential impacts to cultural and historic resources on or near the project site. Examples include consultation with tribes and the department of archaeology and historic preservation, archaeological surveys, historic maps, GIS data, etc. _________________
   None
   ________________________________________________________________
   ________________________________________________________________
   ________________________________________________________________
   ________________________________________________________________
   ________________________________________________________________

d. Proposed measures to avoid, minimize, or compensate for loss, changes to, and disturbance to resources. Please include plans for the above and any permits that may be required _________________
   None
   ________________________________________________________________
   ________________________________________________________________
   ________________________________________________________________
   ________________________________________________________________
   ________________________________________________________________
14. Transportation

a. Identify public streets and highways serving the site or affected geographic area and describe proposed access to the existing street system. Show on site plans, if any. ____________________________
   Lincoln St. and Mallon Ave., no driveway access.

b. Is site or affected geographic area currently served by public transit? If so, generally describe. If not, what is the approximate distance to the nearest transit stop ____________________________
   Yes, approximately 200' to multiple bus lines and stops on Monroe


c. How many additional parking spaces would the completed project or non-project proposal have? How many would the project or proposal eliminate? ____________________________
   No parking spaces


d. Will the proposal require any new or improvements to existing roads, streets, pedestrian, bicycle or state transportation facilities, not including driveways? If so, generally describe (indicate whether public or private). ____________________________
   Replace existing sidewalks and improve accessible curb ramp at corner of Lincoln and Mallon


e. Will the project or proposal use (or occur in the immediate vicinity of) water, rail or air transportation? If so, generally describe. ____________________________
   no
f. How many vehicular trips per day would be generated by the completed project or proposal? If known, indicate when peak volumes would occur and what percentage of the volume would be trucks (such as commercial and non-passenger vehicles). What data or transportation models were used to make these estimates? ____________________________

Unknown, the building is within the downtown parking exemption. ____________________________

(Note: to assist in review and if known, indicate vehicle trips during PM peak, AM Peak, and Weekday (24 hours).)

g. Will the proposal interfere with, affect or be affected by the movement of agricultural and forest products on roads or streets in the area? If so, generally describe. ____________________________

no ____________________________

h. Proposed measures to reduce or control transportation impacts, if any: ____________________________

None ____________________________

15. Public services

a. Would the project result in an increased need for public services (for example: fire protection, police protection, public transit, health care, schools, other)? If so, generally describe. _________

No, the building replaces and existing building of comparable scale. the new building will be fully sprinkled. ____________________________

b. Proposed measures to reduce or control direct impacts on public services, if any:_____________________

None ____________________________
16. Utilities

a. Check utilities currently available at the site:

☐ electricity
☒ natural gas
☒ water
☒ refuse service
☒ telephone
☒ sanitary sewer
☐ septic system

Other: ____________________________

b. Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity which might be needed: ________

No additional utilities
C. SIGNATURE

I, the undersigned, swear under penalty of perjury that the above responses are made truthfully and to the best of my knowledge. I also understand that, should there be any willful misrepresentation or willful lack of full disclosure on my part, the agency must withdraw any determination of Nonsignificance that it might issue in reliance upon this checklist.

Date: 9/25/2023 Signature: David R. Wilde, AIA

Please Print or Type:

Proponent: North Lincoln LLC Address: 1314 S Grand Blvd. #2-288
Phone: 303-718-1617 Spokane, WA 99202

Person completing form (if different from proponent): David Wilde, Wolfe Architectural Group
Phone: 509-455-6999 Address: 1015 N. Calispel St.
Spokane WA 99201

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Staff member(s) reviewing checklist: ________________________________

Based on this staff review of the environmental checklist and other pertinent information, the staff concludes that:

☐ A. there are no probable significant adverse impacts and recommends a Determination of Nonsignificance.

☐ B. probable significant adverse environmental impacts do exist for the current proposal and recommends a Mitigated Determination of Nonsignificance with conditions.

☐ C. there are probable significant adverse environmental impacts and recommends a Determination of Significance.
SPOKANE ENVIRONMENTAL DECISION

File No. B2313706SEPA

MITIGATED DETERMINATION OF NON-SIGNIFICANCE (MDNS)

Date of Issuance: 9/21/2023

Proponent: Jay Torgerson, Rob’s Demolition, 3810 E Boone Ave

Location of proposal: 815 N Lincoln St

Description of proposal: Demolition of a 17,138 sqft commercial building.

Lead agency: City of Spokane, Development Services Center

Plan Reviewer: Amanda Kiehn

The City of Spokane has determined that this proposal will not have a probable significant adverse impact on the environment. Pursuant to WAC 197-11-350(3), the proposal has been clarified, changed, and conditioned to include necessary mitigation measures to avoid, minimize or compensate for probable significant impacts. An environmental impact statement (EIS) is not required under RCW 43.21C.030(2)(c). The necessary mitigation measures are listed below, and the Environmental Checklist is attached.

This determination is based on the following findings and conclusions:

1. Preparation of an Inadvertent Discovery Plan to be implemented into the scope of work as requested by the Spokane Tribe.

2. Prior to the demolition permit issuance, the building will need to come before the Landmarks Commission for eligibility review.

This MDNS is issued after using the optional DNS process in Section 197-11-355 WAC. There is no further comment period on the MDNS.
Responsible official: Dermott Murphy
Position/Title: Building Official
Address: City of Spokane
Development Services Center, Attention: Admin Team
808 West Spokane Falls Boulevard
Spokane, WA 99201-3343
Phone: (509) 625-6300  Fax: (509) 625-6822

Signature: [Signature]  Print Name: DM

You may appeal this determination in writing to the Hearing Examiner, City of Spokane,
808 West Spokane Falls Boulevard, Spokane WA 99201-3343, no later than 14 days from
the date of decision. Be prepared to make specific objections. Information on SEPA
appeal procedures can be provided at the Planning and Development Department

/SEPA/Lincoln, 815 N - 815 N Lincoln Demolition
"B2313706SEPA MDNS" History

Document created by AMANDA KIEHN (AKIEHN@SPOKANEITY.ORG)
2023-09-21 - 7:18:35 PM GMT

Document emailed to Dermott Murphy (dgmurphy@spokaneity.org) for signature
2023-09-21 - 7:18:49 PM GMT

Email viewed by Dermott Murphy (dgmurphy@spokaneity.org)
2023-09-21 - 8:48:38 PM GMT

Document e-signed by Dermott Murphy (dgmurphy@spokaneity.org)
Signature Date: 2023-09-21 - 8:48:53 PM GMT - Time Source: server

Agreement completed.
2023-09-21 - 8:48:53 PM GMT
DESIGN STANDARDS VARIANCE REQUEST FORM

Project Name: Wonderground Building (815 N Lincoln St, Spokane, WA 99201)

City Project Number (if applicable): none yet assigned

List below any deviations from the City of Spokane Design Standards you are proposing. For each variance requested, explain fully the reasons why City Standards cannot be met, and describe how the proposed variance will satisfy fundamental requirements for safety, function, fire protection, appearance and maintainability. Attach additional supporting information as needed.

A geotechnical report prepared for the proposed development determined that the site is entirely underlain by basalt bedrock and infiltration is infeasible. Other means of onsite stormwater disposal (including LID methods) have been considered and determined to be infeasible. For this reason, we are proposing a variance to the City’s standard stormwater requirement that stormwater be disposed of onsite, and instead proposing detention, flow control, and controlled release of onsite stormwater to the City’s stormwater main in N Lincoln St. Our proposed onsite stormwater system limits total-site peak stormwater discharges to 0.05 cubic feet per second for the 50-year, 24-hour design storm, as dictated by City staff during early conceptual discussions of the project.

Attachments: Existing Site Stormwater Management Exhibit, Proposed Site Stormwater Management Exhibit, Geotechnical Report, HydroCAD Stormwater Modeling Output

Submitted by:
Name (please print) Erik Fuentes, PE
Company DCG/Watershed
Signature ___________________ Date 09/20/2023

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____Approved  ____Denied

___________________________ __________
Director of  Engineering Services               Date
A dye test, performed by City staff in September 2023, indicated that runoff from the existing ~13,000 SF (approx.) roof flows unmitigated to the City sewer.

Runoff from existing onsite pollution-generating impervious areas sheet flows unmitigated into the right-of-way.

**Existing Site Stormwater Flow Rates (14,400 SF)**

<table>
<thead>
<tr>
<th>Event</th>
<th>Rainfall (inches)</th>
<th>Runoff (cfs)</th>
<th>Volume (acre-feet)</th>
<th>Depth (inches)</th>
</tr>
</thead>
<tbody>
<tr>
<td>6-month</td>
<td>0.83</td>
<td>0.36</td>
<td>0.017</td>
<td>0.63</td>
</tr>
<tr>
<td>2-year</td>
<td>1.20</td>
<td>0.55</td>
<td>0.027</td>
<td>0.99</td>
</tr>
<tr>
<td>10-year</td>
<td>1.80</td>
<td>0.85</td>
<td>0.043</td>
<td>1.58</td>
</tr>
<tr>
<td>25-year</td>
<td>2.00</td>
<td>0.95</td>
<td>0.049</td>
<td>1.77</td>
</tr>
<tr>
<td>50-year</td>
<td>2.20</td>
<td>1.05</td>
<td>0.054</td>
<td>1.97</td>
</tr>
<tr>
<td>100-year</td>
<td>2.40</td>
<td>1.15</td>
<td>0.060</td>
<td>2.17</td>
</tr>
</tbody>
</table>
Existing 15" Storm Main

20'L x 20'W x 3.75'D detention facility

Flow control structure limiting 50-year, 24-hour peak total site discharge to 0.05scfs or other rate determined by City

Discharge to City stormwater system

Existing 15" Storm Main

Other means of onsite stormwater mitigation (as suggested by the SRSM and Eastern Washington Low Impact Development Manual) which were considered, but determined to be infeasible, are listed below:

- Dispersion is infeasible due to lack of permeable site coverage, as is often the case in urban areas.
- Bioretention/Rain Gardens would require underdrain systems on this site, due to the lack of infiltrating soils. These would effectively provide water quality treatment; if required, but the development of this site does not propose any pollution-generating surfaces. In terms of detention/retention, bio-retention would ultimately require controlled release of stormwater into the City’s drainage system, thus providing only the same benefits as subsurface detention and flow control.
- Tree planting can play a role in reducing stormwater runoff, but not in a measurable way that helps a development project to meet stormwater flow control standards.
- Permeable pavements would not be effective on this site because subsurface soils are not suitable for infiltration. Any runoff infiltrated through permeable pavements would have to be collected in an underdrain system and ultimately conveyed to the City’s drainage system.
- Green roofs slow runoff discharge rates for small storm events, and to a lesser extent reduce the total volume of runoff by allowing for evaporation and transpiration. However, they aren’t particularly effective in helping to meet flow control standards during large storm events, which typically control the stormwater design. They also introduce significant expense in construction—both in labor and materials needed to build the green roofs themselves, as well as the additional structural loading on the roof - and ongoing maintenance.
- Rainwater harvesting is infeasible because the proposed use of this site does not include a need for rainwater.
07 September 2023
Project No. 22-6764

Mr. David Wilde
WOLFE ARCHITECTUAL GROUP
1015 North Calispel Street, Suite B
Spokane, WA 99201
Via Email: dwilde@wagarch.com

Subject: Localized Shallow Geologic Conditions
FORMER R A S PROPERTIES, LLC
815 and 817 North Lincoln Street, Spokane, Washington

Dear Mr. Wilde:

On behalf of North Lincoln LLC, AdvancedGeo, Inc. (AGI) is providing the following information regarding localized geologic conditions encountered at the site during performance of a subsurface investigation on 30 March 2022.

Shallow geologic conditions in the Emerson-Garfield neighborhood of Spokane include basalt with overlying glacial gravels of varying thickness. The depth to basalt can vary between approximately 2 and 40 feet below surface grade. Groundwater is generally present at depths between 30 and 50 feet.

As part of a due diligence investigation, AGI advanced four (4) shallow borings at the site using a truck-mounted, GeoProbe 5400 direct push rig. Borings were advanced in the following areas:

- At the south end of the main warehouse (interior).
- Immediately west of the center of the main warehouse (interior).
- At the north end of the main warehouse (interior).
- Adjacent to the north side of the building (exterior) in the current parking area.

Refusal was encountered in each boring at depths between 2 and 8 feet below surface grade due to the presence of basalt bedrock. Basalt was present at a more shallow depth on the north side of the property (2 feet) and slightly deeper depth (8 feet) on the south side of the property. Soils encountered overlying the basalt bedrock were generally gravelly silt and sands, with poor sample recovery.
Should you have any questions or need more information, please do not hesitate to contact our office at (800) 511-9300.

Sincerely,

AdvancedGeo, Inc.

Robert E. Marty
President

cc: Mr. Pete Mounsey
Post-Development (Roof & Patio) → Detention
This report was prepared with the free HydroCAD SAMPLER, which is licensed for evaluation and educational use ONLY. For actual design or modeling applications you MUST use a full version of HydroCAD which may be purchased at www.hydrocad.net. Full programs also include complete technical support, training materials, and additional features which are essential for actual design work.

### Area Listing (all nodes)

<table>
<thead>
<tr>
<th>Area (acres)</th>
<th>CN</th>
<th>Description (subcatchment-numbers)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.331</td>
<td>98</td>
<td>Roofs (1S)</td>
</tr>
<tr>
<td><strong>0.331</strong></td>
<td><strong>98</strong></td>
<td><strong>TOTAL AREA</strong></td>
</tr>
</tbody>
</table>
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## Soil Listing (all nodes)

<table>
<thead>
<tr>
<th>Area (acres)</th>
<th>Soil Group</th>
<th>Subcatchment Numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.000</td>
<td>HSG A</td>
<td></td>
</tr>
<tr>
<td>0.000</td>
<td>HSG B</td>
<td></td>
</tr>
<tr>
<td>0.000</td>
<td>HSG C</td>
<td></td>
</tr>
<tr>
<td>0.000</td>
<td>HSG D</td>
<td></td>
</tr>
<tr>
<td>0.331</td>
<td>Other</td>
<td>1S</td>
</tr>
<tr>
<td><strong>0.331</strong></td>
<td><strong>TOTAL AREA</strong></td>
<td></td>
</tr>
</tbody>
</table>
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Time span=1.00-72.00 hrs, dt=0.01 hrs, 7101 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Post-Development (Roof & Roof &  
Runoff Area=14,400 sf  100.00% Impervious  Runoff Depth=0.99”
  Tc=5.0 min  CN=98  Runoff=0.55 cfs  0.027 af

Pond 3P: Detention 
Peak Elev=1,888.16’ Storage=0.014 af  Inflow=0.55 cfs  0.027 af
Outflow=0.03 cfs  0.027 af

Total Runoff Area = 0.331 ac  Runoff Volume = 0.027 af  Average Runoff Depth = 0.99”
0.00% Pervious = 0.000 ac  100.00% Impervious = 0.331 ac
Summary for Subcatchment 1S: Post-Development (Roof & Patio)

Runoff = 0.55 cfs @ 11.96 hrs, Volume = 0.027 af, Depth = 0.99"
Routed to Pond 3P: Detention

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span = 1.00-72.00 hrs, dt = 0.01 hrs
Type II 24-hr 2-year Rainfall = 1.20"

<table>
<thead>
<tr>
<th>Area (sf)</th>
<th>CN</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>14,400</td>
<td>98</td>
<td>Roofs</td>
</tr>
<tr>
<td>14,400</td>
<td>98</td>
<td>100.00% Impervious Area</td>
</tr>
</tbody>
</table>

Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description
5.0      |              |              |                  |               | Direct Entry,

Subcatchment 1S: Post-Development (Roof & Patio)

Hydrograph

Type II 24-hr 2-year Rainfall = 1.20"
Runoff Area = 14,400 sf
Runoff Volume = 0.027 af
Runoff Depth = 0.99"
Tc = 5.0 min
CN = 98

0.6
0.55
0.5
0.45
0.4
0.35
0.3
0.25
0.2
0.15
0.1
0.05
0
0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8 0.9 1.0
2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46 48 50 52 54 56 58 60 62 64 66 68 70 72

Flow (cfs)
Time (hours)
Summary for Pond 3P: Detention

Inflow Area = 0.331 ac, 100.00% Impervious, Inflow Depth = 0.99" for 2-year event
Inflow = 0.55 cfs @ 11.96 hrs, Volume = 0.027 af
Outflow = 0.03 cfs @ 12.85 hrs, Volume = 0.027 af, Atten = 95%, Lag = 53.8 min
Primary = 0.03 cfs @ 12.85 hrs, Volume = 0.027 af

Routed to nonexistent node 4P

Routing by Stor-Ind method, Time Span = 1.00-72.00 hrs, dt = 0.01 hrs
Peak Elev = 1,888.16' @ 12.85 hrs  Surf.Area = 0.007 ac   Storage = 0.014 af

Plug-Flow detention time = 238.0 min calculated for 0.027 af (100% of inflow)
Center-of-Mass det. time = 237.9 min (1,015.7 - 777.7)

<table>
<thead>
<tr>
<th>Volume</th>
<th>Invert</th>
<th>Avail.Storage</th>
<th>Storage Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>#1</td>
<td>1,886.24'</td>
<td>0.031 af</td>
<td>7.00'W x 11.23'L x 4.25'H Prismatoid x 4</td>
</tr>
</tbody>
</table>

Device Routing Invert Outlet Devices

<table>
<thead>
<tr>
<th>Device</th>
<th>Routing</th>
<th>Invert</th>
<th>Outlet Devices</th>
</tr>
</thead>
<tbody>
<tr>
<td>#1</td>
<td>Primary</td>
<td>1,886.14'</td>
<td>0.5&quot; Horiz. Orifice/Grate X 3.00  C = 0.600</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Limited to weir flow at low heads</td>
</tr>
<tr>
<td>#2</td>
<td>Primary</td>
<td>1,891.99'</td>
<td>24.0&quot; Horiz. Orifice/Grate C = 0.600</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Limited to weir flow at low heads</td>
</tr>
</tbody>
</table>

Primary OutFlow Max = 0.03 cfs @ 12.85 hrs  HW = 1,888.16'  (Free Discharge)
(Orifice Controls 0.03 cfs @ 6.85 fps)

20230919_815 W Mallon Post Combined 005cfs_4x2500g Type II 24-hr 2-year Rainfall = 1.20"
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Pond 3P: Detention

Hydrograph

Inflow Area = 0.331 ac
Peak Elev = 1,888.16'
Storage = 0.014 af

0.55 cfs
0.03 cfs
## Stage-Discharge for Pond 3P: Detention

<table>
<thead>
<tr>
<th>Elevation (feet)</th>
<th>Primary (cfs)</th>
<th>Elevation (feet)</th>
<th>Primary (cfs)</th>
<th>Elevation (feet)</th>
<th>Primary (cfs)</th>
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<tr>
<td>1,886.24</td>
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### Stage-Area-Storage for Pond 3P: Detention

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This report was prepared with the free HydroCAD SAMPLER, which is licensed for evaluation and educational use ONLY. For actual design or modeling applications you MUST use a full version of HydroCAD which may be purchased at www.hydrocad.net. Full programs also include complete technical support, training materials, and additional features which are essential for actual design work.

Time span=1.00-72.00 hrs, dt=0.01 hrs, 7101 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Post-Development (Roof &
Runoff Area=14,400 sf  100.00% Impervious  Runoff Depth=1.58"
Tc=5.0 min  CN=98  Runoff=0.85 cfs  0.043 af

Pond 3P: Detention
Peak Elev=1,889.50' Storage=0.024 af  Inflow=0.85 cfs  0.043 af
Outflow=0.04 cfs  0.043 af

Total Runoff Area = 0.331 ac  Runoff Volume = 0.043 af  Average Runoff Depth = 1.58"
0.00% Pervious = 0.000 ac  100.00% Impervious = 0.331 ac
Summary for Subcatchment 1S: Post-Development (Roof & Patio)

Runoff = 0.85 cfs @ 11.96 hrs, Volume = 0.043 af, Depth = 1.58"
Routed to Pond 3P : Detention

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span = 1.00-72.00 hrs, dt = 0.01 hrs
Type II 24-hr 10-year Rainfall = 1.80"

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Tc (min) | Length (ft) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
---|---|---|---|---|---|
5.0 | | | | | Direct Entry, |

Subcatchment 1S: Post-Development (Roof & Patio)
Summary for Pond 3P: Detention

Inflow Area = 0.331 ac, 100.00% Impervious, Inflow Depth = 1.58" for 10-year event
Inflow = 0.85 cfs @ 11.96 hrs, Volume = 0.043 af
Outflow = 0.04 cfs @ 13.08 hrs, Volume = 0.043 af, Atten = 96%, Lag = 67.5 min
Primary = 0.04 cfs @ 13.08 hrs, Volume = 0.043 af
Routed to nonexistent node 4P

Routing by Stor-Ind method, Time Span = 1.00-72.00 hrs, dt = 0.01 hrs
Peak Elev = 1,889.50' @ 13.08 hrs Surf.Area = 0.007 ac Storage = 0.024 af

Plug-Flow detention time = 319.9 min calculated for 0.043 af (100% of inflow)
Center-of-Mass det. time = 319.9 min (1,085.6 - 765.7)

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Primary OutFlow

Max = 0.04 cfs @ 13.08 hrs HW = 1,889.50’ (Free Discharge)
(Orifice Controls 0.04 cfs @ 8.82 fps)
(Controls 0.00 cfs)
Pond 3P: Detention

Hydrograph

Flow (cfs)

0.95
0.9
0.85
0.8
0.75
0.7
0.65
0.6
0.55
0.5
0.45
0.4
0.35
0.3
0.25
0.2
0.15
0.1
0.05
0

Time (hours)

2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46 48 50 52 54 56 58 60 62 64 66 68 70 72

Inflow Area=0.331 ac
Peak Elev=1,889.50'
Storage=0.024 af

0.85 cfs

0.04 cfs

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### Stage-Discharge for Pond 3P: Detention

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Stage-Area-Storage for Pond 3P: Detention

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This report was prepared with the free HydroCAD SAMPLER, which is licensed for evaluation and educational use ONLY. For actual design or modeling applications you MUST use a full version of HydroCAD which may be purchased at www.hydrocad.net. Full programs also include complete technical support, training materials, and additional features which are essential for actual design work.

Time span=1.00-72.00 hrs, dt=0.01 hrs, 7101 points
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Post-Development (Roof &

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<th>Runoff Area</th>
<th>14,400 sf</th>
<th>100.00% Impervious</th>
<th>Runoff Depth</th>
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Pond 3P: Detention

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<th>Peak Elev</th>
<th>1,889.96’</th>
<th>Storage</th>
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<th>Inflow</th>
<th>0.95 cfs</th>
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Total Runoff Area = 0.331 ac  Runoff Volume = 0.049 af  Average Runoff Depth = 1.77”
0.00% Pervious = 0.000 ac  100.00% Impervious = 0.331 ac
Summary for Subcatchment 1S: Post-Development (Roof & Patio)

Runoff = 0.95 cfs @ 11.96 hrs, Volume = 0.049 af, Depth = 1.77"
Routed to Pond 3P: Detention

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span = 1.00-72.00 hrs, dt = 0.01 hrs
Type II 24-hr 25-year Rainfall = 2.00"

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<td>100.00% Impervious Area</td>
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Tc, Length, Slope, Velocity, Capacity, Description

Direct Entry,

Subcatchment 1S: Post-Development (Roof & Patio)

Hydrograph

0.95 cfs

Flow (cfs)

Time (hours)
Summary for Pond 3P: Detention

Inflow Area = 0.331 ac, 100.00% Impervious, Inflow Depth = 1.77" for 25-year event
Inflow = 0.95 cfs @ 11.96 hrs, Volume = 0.049 af
Outflow = 0.04 cfs @ 13.17 hrs, Volume = 0.049 af, Attenuation = 96%, Lag = 72.6 min
Primary Outflow = 0.04 cfs @ 13.17 hrs, Volume = 0.049 af

Routed to nonexistent node 4P

Routing by Stor-Ind method, Time Span = 1.00-72.00 hrs, dt = 0.01 hrs
Peak Elev = 1,889.96' @ 13.17 hrs, Surf. Area = 0.007 ac, Storage = 0.027 af

Plug-Flow detention time = 344.2 min calculated for 0.049 af (100% of inflow)
Center-of-Mass det. time = 344.2 min (1,107.0 - 762.8)

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<td>0.031 af</td>
<td>7.00'W x 11.23'L x 4.25'H Prismatoid × 4</td>
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Device Routing Invert Elev. Outlet Devices

- #1 Primary 1,886.14' 0.5" Horiz. Orifice/Grate X 3.00 C= 0.600 Limited to weir flow at low heads
- #2 Primary 1,891.99' 24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary Outflow
- #1=Orifice/Grate Max=0.04 cfs @ 13.17 hrs HW=1,889.96' (Free Discharge)
- #2=Orifice/Grate (Orifice Controls 0.04 cfs @ 9.41 fps)
Pond 3P: Detention

Hydrograph

Inflow Area = 0.331 ac
Peak Elev = 1,889.96'
Storage = 0.027 af

Flow (cfs)

Time (hours)

0.95 cfs

0.04 cfs
### Stage-Discharge for Pond 3P: Detention

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This report was prepared with the free HydroCAD SAMPLER, which is licensed for evaluation and educational use ONLY. For actual design or modeling applications you MUST use a full version of HydroCAD which may be purchased at www.hydrocad.net. Full programs also include complete technical support, training materials, and additional features which are essential for actual design work.

Time span=1.00-72.00 hrs, dt=0.01 hrs, 7101 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Post-Development (Roof &
Runoff Area=14,400 sf  100.00% Impervious  Runoff Depth=1.97"
Tc=5.0 min  CN=98  Runoff=1.05 cfs  0.054 af

Pond 3P: Detention
Peak Elev=1,890.43'  Storage=0.030 af  Inflow=1.05 cfs  0.054 af
Outflow=0.04 cfs  0.054 af

Total Runoff Area = 0.331 ac  Runoff Volume = 0.054 af  Average Runoff Depth = 1.97"
0.00% Pervious = 0.000 ac  100.00% Impervious = 0.331 ac
Summary for Subcatchment 1S: Post-Development (Roof & Patio)

Runoff = 1.05 cfs @ 11.96 hrs, Volume= 0.054 af, Depth= 1.97"
Routed to Pond 3P : Detention

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-72.00 hrs, dt= 0.01 hrs
Type II 24-hr 50-year Rainfall=2.20"

Area (sf) CN Description
* 14,400 98 Roofs
14,400 98 100.00% Impervious Area

Tc Length Slope Velocity Capacity Description
(min) (feet) (ft/ft) (ft/sec) (cfs)
5.0

Direct Entry,

Subcatchment 1S: Post-Development (Roof & Patio)
Summary for Pond 3P: Detention

Inflow Area = 0.331 ac, 100.00% Impervious. Inflow Depth = 1.97” for 50-year event
Inflow = 1.05 cfs @ 11.96 hrs, Volume = 0.054 af
Outflow = 0.04 cfs @ 13.25 hrs, Volume = 0.054 af, Atten = 96%, Lag = 77.4 min
Primary = 0.04 cfs @ 13.25 hrs, Volume = 0.054 af
  Routed to nonexistent node 4P

Routing by Stor-Ind method, Time Span = 1.00-72.00 hrs, dt = 0.01 hrs
Peak Elev = 1,890.43' @ 13.25 hrs Surf. Area = 0.007 ac Storage = 0.030 af

Plug-Flow detention time = 367.4 min calculated for 0.054 af (100% of inflow)
Center-of-Mass det. time = 367.3 min (1,127.7 - 760.4)

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<td>0.031 af</td>
<td>7.00'W x 11.23'L x 4.25'H Prismatoid x 4</td>
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<table>
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<tr>
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<tr>
<td>#2</td>
<td>Primary</td>
<td>1,891.99'</td>
<td>24.0&quot; Horiz. Orifice/Grate C = 0.600 Limited to weir flow at low heads</td>
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</tbody>
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Primary OutFlow Max = 0.04 cfs @ 13.25 hrs HW = 1,890.43’ (Free Discharge)
1=Orifice/Grate Orifice Controls 0.04 cfs @ 9.97 fps
2=Orifice/Grate Controls 0.00 cfs
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Pond 3P: Detention

Hydrograph

Inflow Area=0.331 ac
Peak Elev=1,890.43'
Storage=0.030 af

- Inflow: 1.05 cfs
- Primary: 0.04 cfs
| Elevation (feet) | Primary (cfs) | | Elevation (feet) | Primary (cfs) | | Elevation (feet) | Primary (cfs) |
|-----------------|--------------| |-----------------|--------------| |-----------------|--------------|
| 1,886.24        | 0.00         | | 1,886.29        | 0.00         | | 1,890.94        | 0.04         |
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### Stage-Area-Storage for Pond 3P: Detention

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Type II 24-hr 100-year Rainfall=2.40”

Subcatchment 1S: Post-Development (Roof &

Peak Elev=1,892.03’ Storage=0.031 af Inflow=1.15 cfs 0.060 af

Total Runoff Area = 0.331 ac Runoff Volume = 0.060 af Average Runoff Depth = 2.17”

0.00% Pervious = 0.000 ac 100.00% Impervious = 0.331 ac

Time span=1.00-72.00 hrs, dt=0.01 hrs, 7101 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Runoff Area=14,400 sf 100.00% Impervious Runoff Depth=2.17”
Tc=5.0 min CN=98 Runoff=1.15 cfs 0.060 af

Pond 3P: Detention

Peak Elev=1,892.03’ Storage=0.031 af Inflow=1.15 cfs 0.060 af
Outflow=0.25 cfs 0.060 af

Total Runoff Area = 0.331 ac Runoff Volume = 0.060 af Average Runoff Depth = 2.17”

0.00% Pervious = 0.000 ac 100.00% Impervious = 0.331 ac

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Summary for Subcatchment 1S: Post-Development (Roof & Patio)

Runoff = 1.15 cfs @ 11.96 hrs, Volume = 0.060 af, Depth = 2.17"
Routed to Pond 3P: Detention

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span = 1.00-72.00 hrs, dt = 0.01 hrs
Type II 24-hr 100-year Rainfall=2.40"

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<th>Slope (ft/ft)</th>
<th>Velocity (ft/sec)</th>
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Direct Entry,

Subcatchment 1S: Post-Development (Roof & Patio)

Hydrograph
Summary for Pond 3P: Detention

Inflow Area = 0.331 ac, 100.00% Impervious, Inflow Depth = 2.17” for 100-year event
Inflow = 1.15 cfs @ 11.96 hrs, Volume = 0.060 af
Outflow = 0.25 cfs @ 12.17 hrs, Volume = 0.060 af, Atten = 78%, Lag = 12.8 min
Primary = 0.25 cfs @ 12.17 hrs, Volume = 0.060 af
Routed to nonexistent node 4P

Routing by Stor-Ind method, Time Span = 1.00-72.00 hrs, dt = 0.01 hrs
Peak Elev = 1,892.03’ @ 12.17 hrs Surf.Area = 0.007 ac Storage = 0.031 af

Plug-Flow detention time = 353.8 min calculated for 0.060 af (100% of inflow)
Center-of-Mass det. time = 353.7 min (1,111.9 - 758.2)

<table>
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<th>Invert</th>
<th>Avail.Storage</th>
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<td>7.00’W x 11.23’L x 4.25’H Prismatoid x 4</td>
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Device Routing Invert Outlet Devices

- #1 Primary 1,886.14’ 0.5” Horiz. Orifice/Grate X 3.00 C = 0.600 Limited to weir flow at low heads
- #2 Primary 1,891.99’ 24.0” Horiz. Orifice/Grate C = 0.600 Limited to weir flow at low heads

Primary OutFlow Max = 0.22 cfs @ 12.17 hrs HW = 1,892.03’ (Free Discharge)
1=Orifice/Grate (Orifice Controls 0.05 cfs @ 11.69 fps)
2=Orifice/Grate (Weir Controls 0.17 cfs @ 0.66 fps)
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Pond 3P: Detention

Hydrograph

- Inflow Area = 0.331 ac
- Peak Elev = 1,892.03'
- Storage = 0.031 af
- Inflow = 1.15 cfs
- Primary Flow = 0.25 cfs

Flow (cfs) vs Time (hours)
Stage-Discharge for Pond 3P: Detention

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### Stage-Area-Storage for Pond 3P: Detention

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